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CONTENTS

WINTER ISSUE

Curt Newton and the Futurism

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THE FACE OF THE DEEP

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ALI BABA, JUNIOR Oscar J. Friend 103
Plates of Mercury Find Themselves in a Pratie Pickle!

THE TREASURE *James Battling the Cruelty of Men and Nature in a Harsh World* William Morrison 108

Special Features

UNDER OBSERVATION (Letters)	Sergeant Saturn	10
THE FUTUREMEN	A Department	98
THE WORLDS OF TOMORROW	The Pirates' Planet	105
THE FUTURE OF CAPTAIN FUTURE	Announcements	128

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Figure 1 consists of three bar charts, one for each disease: COVID-19, Dengue, and Malaria. Each chart displays the number of cases for each of the 10 states in the Amazon region from 2019 to 2022. The y-axis represents the number of cases, ranging from 0 to 100,000. The x-axis shows the years 2019, 2020, 2021, and 2022. The data is presented for each of the 10 states: Acre, Amapá, Amazonas, Pará, Roraima, Mato Grosso, Rondônia, Roraima, Tocantins, and Amapá.

Disease	State	2019	2020	2021	2022
COVID-19	Acre	~10,000	~15,000	~20,000	~25,000
	Amapá	~5,000	~10,000	~15,000	~20,000
	Amazonas	~15,000	~20,000	~25,000	~30,000
	Pará	~20,000	~25,000	~30,000	~35,000
	Roraima	~10,000	~15,000	~20,000	~25,000
	Mato Grosso	~15,000	~20,000	~25,000	~30,000
	Rondônia	~10,000	~15,000	~20,000	~25,000
	Roraima	~10,000	~15,000	~20,000	~25,000
	Tocantins	~10,000	~15,000	~20,000	~25,000
	Amapá	~5,000	~10,000	~15,000	~20,000
Dengue	Acre	~10,000	~15,000	~20,000	~25,000
	Amapá	~5,000	~10,000	~15,000	~20,000
	Amazonas	~15,000	~20,000	~25,000	~30,000
	Pará	~20,000	~25,000	~30,000	~35,000
	Roraima	~10,000	~15,000	~20,000	~25,000
	Mato Grosso	~15,000	~20,000	~25,000	~30,000
	Rondônia	~10,000	~15,000	~20,000	~25,000
	Roraima	~10,000	~15,000	~20,000	~25,000
	Tocantins	~10,000	~15,000	~20,000	~25,000
	Amapá	~5,000	~10,000	~15,000	~20,000
Malaria	Acre	~10,000	~15,000	~20,000	~25,000
	Amapá	~5,000	~10,000	~15,000	~20,000
	Amazonas	~15,000	~20,000	~25,000	~30,000
	Pará	~20,000	~25,000	~30,000	~35,000
	Roraima	~10,000	~15,000	~20,000	~25,000
	Mato Grosso	~15,000	~20,000	~25,000	~30,000
	Rondônia	~10,000	~15,000	~20,000	~25,000
	Roraima	~10,000	~15,000	~20,000	~25,000
	Tocantins	~10,000	~15,000	~20,000	~25,000
	Amapá	~5,000	~10,000	~15,000	~20,000

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

[illegible]

Figure 1

10

Abstract

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

100

Abstract

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Abstract



Where Sergeant Saturn, Space-Pilots and Kiwis Meet

DO you kiwis have the remotest idea how large the mail sack is for CAPTAIN FUTURE? Well, I'll tell you. It's so large that I can't cram a tenth of the monthly mail into the Under Observation hatch. So the old Sarge wants to apologize to you peo-les whose letters don't see print and to ask you to write again—as often as you like. You can rest assured that no less than three senior astrologists read 'em. Pretty soon I'll have to start an acknowledgment column for letters that I can't get around to printing.

By all the space gods, I'll do just that if the mail gets any heavier.

Okay, after licking your chops, you little beastie. Here's as juicy a communique to start this month's bean-bag of conversation as the old Sarge ever saw. It's a letter from Edmund Hamilton, so all you space apes who've been calling him names better jump behind an asteroid as he starts spraying the ether with a proton gun.

A CHAT WITH FUTURE

By Edmund Hamilton

I thought maybe I ought to write you about a talk I had with Captain Future the other night. Where's that—so I talk with Captain Future? Sure I do! Where else do you suppose I learned the details of all his adventures, if not from Old Newton himself?

Now come he manage to talk with me, when he's in the Future Room, my dear friend? Well, as easily as I can figure it out, the projects an astrologer picks up here look along the time dimension. It just happens that I'm able to pick up this mental message, and that's why he relies on me to tell his capdits in our own twentieth century. Of course, some people think that I had insight or made those messages, and that I made it all up in my own mind. But I know better.

Anyway, the last time I heard from Captain Future, I finished up saying and that's how the book at him.

I asked him, "Couldn't you be a little more specific about some of these scientific projects you talk about?" The matter of time after read about your capdits would like to have some of these things explained in more detail.

"For instance," he said back.

"Well, for instance, you refer to something called 'an intelligence.' I told you, 'You tell me if an instrument that can pick up a radio-gram is destroyed by detecting the random character.' But you don't tell how the beam gets

through a simply consists of four matched physical distributions generated in pairs between two identical devices."

"That's my mistake," I begged. "That doesn't even apply to me. I don't know what a 'physical distribution' or a 'beam' is, sir."

"I suppose, you don't," he related. "These instruments being even less thought of, back in your time. That's why I don't try to explain every detail of my own science to you. People of your age couldn't understand those details. Could you explain to me or the others if I were just how a radio works?" You could tell him what the radio did, but could you make this statement come to life?"

"I guess not," I admitted.

"No more can I explain the detailed workings of the science of my time to the people of your," Captain Future declared.

"I am understanding that," I agreed. "But there's one other thing some people must learn. Why is it you don't make me visit your office or some of the small scientific museum you pointed in your past episode? After the amazing device you took off in Quary, and the demonstration you took away from the Space Museum?"

"My experiments, Mr. time, is that I don't see anything to carry around and that most everyone I go to get assistance from would be mad about it. They are there. You see, these machines and instruments are the danger for the Space ship to know about. While who I wanted them away from their presence. That's why I keep you locked up in the workshop of my Museum. Nobody would be able to get his hands on them and use them to their fullest extent. And they're what to stay there where they're safe."

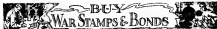
"One more question," I asked, as I seemed to was about to leave. "There's another thing someone around here that who seems to be sending back mental messages about his space capdits, and adventures. Is it the same?"

"Captain Future?" Captain Future laughed. "Yes. The kind of man he is a kind of old-fashioned, who was never out of the Space Museum in his life. But he gets out of some way from his laboratory and then comes and tells me about his adventures in space. But about the appropriate points from time to time, they still say that nobody ever lived who could attack the truth like Sergeant Saturn."

Well, you Frog-eyes can come out from back of that nebula now. Of all the kind-out-hearted men I ever knew, Edmund Hamilton takes the brass-banded gibbous of the Spacemen's Café. Here he let you little monsters off with a pat on the head—or whatever that prostrator is called that holds your wart ears apart—and then slips a proton ring over my nose just to give you peo-les a laugh.

Okay, laugh then, and remember Hamil-

(Continued on page 12)



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MOVE WITH THE MARINES

Dr. PFC D. W. Shaw

Read the article concerning my stay in London, and tonight I'd drop you a line giving you the date of my location at present. I'm back in good old U.S.A. (Thank goodness!) and hope to stay at least for a while while the Marines are always on the move, so I can't give you any data as to when we'll be home.

I included two small letters from a couple of my "BUTTERFLY" pals, and was very satisfied to see my little "BUTTERFLY" magazine.

The story CHALET 9 COMMENTS I thought was very nice and, mainly because, the descriptions of such deep, dark, or strange happenings is thoroughly explained. The character I met the most liked out of all those "Circles Finding better ways to save time with you, if it is going to have the mentioned help around, especially when there is much activity in your store."

Well, I'll share for now, and again I want to thank your personnel and my Professorship chairs in Ohio and Texas, for the magnanimity and the friendly letters. I could be surprised how many girls are as space minded as my fellow students.

Sorry with your past addition, I'll be patiently waiting--I did find camp above San Diego Pass.

"Kind, you certainly do get around yourself, and the old Sarge is mighty glad to learn you've heard from a couple of Future-men. And what you say about the gals is so true that the old Sarge goes to bed every night to dream about the pleasant future of Captain Future. When we get all the gals space-minded they'll be angels. Nope, I don't mind, they'll just be up in the air. I mean they'll be educated to a distinct and distinguished field of fifteen. When you are ordered to the outport station on Neptune, let me know. I've got the telephone numbers of a couple of Neptunian cuties who—hey! What am I saying?"

(Continued on page 141)

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ACCOUNTANCY

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THIRD AN

OPPORTUNITY DAYS

WITHIN war, state and federal legislation requiring more accurate accounting from businesses than ever before, the limited, yet useful, agreement is obtaining a much more complete, albeit a distorted, picture of America's business picture as important figures in efforts to develop the most rational and accurate indicators for the world business system.

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Figure 1

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Abstract

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THE FACE OF THE DEEP



Morimos raised his atom-gun at Captain Future just as Joan emerged from her cabin. (Chap. II)

THE FACE OF THE DEEP

By EDMOND HAMILTON

Carried Far Outside the Solar System and wrecked on a Volcanic Planetoid in Company with a Shipload of Condemned Criminals, Captain Future Faces the Supreme Test of His Courage!

CHAPTER I

Prison Ship

SHE had been a proud ship once, a splendid, shining liner rocketing between the planets with laughter and merriment and happiness aboard. But that had been years ago. Tonight she lay grim and black in her dock at New York spaceport, somberly waiting to carry damned souls to their place of punishment.

Her name was the *Vidcan* and she was the famous prison-ship of the Planet Patrol. Once a year, she went out through the worlds upon a fateful voyage. At each world, criminals sentenced to life imprisonment came aboard her. The end of the voyage was at the grim, gray Interplanetary Prison on Cerberus, moon of Pluto.

Men in purple-striped convict dress were shuffling now under the krypton lights' blue glare toward the looming black hull. They were a motley crew of vicious, hardened criminals—mostly hard-faced Earthmen, but a few green-skinned Venusians and red Martians.

They were guarded by vigilant, armed officers in the black uniform of the Planet Patrol.

A girl who also wore that black uniform stood under the lights near the ship, shaking her dark head at her tall, redhaired male companion.

"I have to go, Curt," she was protesting. "The Patrol is short-handed because of that trouble on Mercury. And these criminals must be well-guarded, for they're the most dangerous lot in the System."

"But to send a girl as a guard-officer on that hell-ship!" exclaimed the tall, redhaired young man angrily. "You Commander must be crazy."

Joan Randall, slim and dark and youthful in her black jacket and slacks, was distractingly pretty in her resentful denial.

"You talk as though I were a sniping debutante who had never been off Earth before," she said indignantly. "Haven't I been working for the Patrol for four years?"

Curt Newton objected. "You've been in the Secret Service section of the Patrol. That's different from guarding a lot of hellions on a prison ship."

His lean, sparsely-bronzed face was sober with anxiety, and his clear gray eyes had a worried frown

in them as he expostulated with the girl.

He did not often worry about danger, this brilliant adventurer and scientific wizard whom the whole System knew as Captain Future. To him and his three comrades, the famous Futuremen, danger wore a familiar face. They had met it countless times in their star-roving quests to far worlds, in their ceaseless crusade against the master-criminals of the System.

BUT danger to himself was to Curt a very different thing than a danger that threatened that girl he loved. That was why the tall, redheaded planeteer bent toward her in a final earnest appeal.

"I've got a premonition about this voyage, Joan. A hunch, you can call it. I don't want you to go."

Her brown eyes laughed up at him. "You're getting jumpy as a Saturnian shadow-cat, Curt. There's no danger. Our criminals will be tightly locked up until we reach Cerberus."

There came a startling interruption. It was the sudden shrieking of one of the convicts who were being marched into the ship.

He was a middle-aged Earthman, with a mass of iron-gray hair falling disorderedly about his haggard white face and terror-dilated eyes.

"You're taking me to death!" he was screaming wildly, struggling with the uniformed guards. "There's death on that ship!"

There was something peculiarly disturbing about the wild face and crazy screams. But the alert Planet Patrol officers guarding the line of shuffling convicts quickly hurried the struggling prisoner aboard.

Joan Randall's fine eyes had pity in them. "That's Rollinger — you remember, Doctor John Rollinger of American University."

Captain Future nodded thoughtfully. "The biophysicist who killed his colleague last month? I thought his attorneys pleaded insanity?"

"They did," the girl answered. "They claimed Rollinger's mind was wrecked by an encephalographic experiment he carried too far. But the prosecution claimed he was shamming. He got life on Cerberus."

"And you're going on a voyage of weeks with scores of others like that homicidal maniac?" Curt Newton said, with deepened dismay. "Some of



The agile android seized the rope of vines and was quickly drawn up out of Chaos Canyon.
(Chap. XI)

them worse! I've seen the prisoner-list. Kam Ivan, the Martian space-prate, Morenos, that poisonous Venusian murder-ring leader, Boraboll the Uranian, the wildest truckster in the System -- and dozens more. Joan, I won't let you do it!"

Joan shook her dark head stubbornly. "It's too late to argue about it now. All the prisoners are aboard. We take off in five minutes."

A voice came from the darkness behind them -- a slightly hissing voice that was oddly alien in timbre.

"What's the matter, Chief?" it asked. Curt. "Haven't you talked reason into her yet?"

It was Otho, one of the three Futuremen. He and Grag and the Bram were advancing into the circle of light.

The three Futuremen made a spectacle so strange that many people would have recoiled from them in terror. But Joan was too well acquainted with these three loyal comrades of Curt, to see any strangeness about them.

Otho, the android, was perhaps the most human-looking of the three. He looked, indeed, much like an ordinary man except that his lithe body had a curiously rubbery, boneless appearance, and his chalk-white face and slanted green eyes held a superhuman devilry and mocking humor. Otho was a man -- but a synthetic man. He had been created in a laboratory, long ago.

Grag, the robot, had been created in that same laboratory, in the long-dead past. But Grag had been made of metal. He was a gigantic, manlike metal figure, seven feet high. His metal torso and limbs hinted his colossal strength. But the strange face of his bulbous metal head, with its gleaming photoelectric eyes and mechanical loudspeaker voice-orifice, gave no sign of the intelligence and loyalty of his complex mechanical brain.

The Bram, third of the Futuremen, was by far the strangest. Yet he had been an ordinary human, once. He had been Simon Wright, brilliant, aging Earth scientist. Dying of an incurable ailment, Wright's living brain had been removed from his human body and transferred into a special serum case in which it still lived, thought and acted. The Bram now resembled a square box of transparent metal. Upon one face of it were his protruding lens-like eyes and macrophonic ears and speech apparatus. From compact generators inside the case jetted the magnetic tractorbeams that enabled the Bram to glide swiftly through the air and to handle

objects and tools.

"I THOUGHT," Otho was saying to Captain Future, "that we came on this rush trip to Earth to stop Joan from going on this crazy assignment."

"We did, but we might as well have stayed at home on the Moon," Curt said disgustedly. "She's as male-headed as -- as --"

"As a mule," Joan finished for him, with a laugh.

Grag stepped forward. The giant metal robot suddenly pecked up Joan in his mighty arms as though she were a doll.

"Do you want me to keep her here, Chief?" he asked Captain Future in his deep, booming voice.

"Grag, you put me down!" stormed the girl.

"Curt, if you try to keep me here by force --"

"Put her down, Grag," growled Captain Future.

"You can reason with a Jovian marsh-elephant or a Uranian cave-bear -- but not with a woman."

An elderly officer in the black uniform of the Patrol was hurrying toward them from the black ship. His grizzled face and bleak old eyes lit with pleasure as he recognized Curt and the Futuremen.

"Come to see us off, Cap'n Future?" he asked.

"Where's your *Comet*?"

Marshal Ezra Gurney, veteran officer of the Planet Patrol, was referring to the famous little ship of the Futuremen. Curt answered by waving his hand toward the distant, lighted pinnacle of Government Tower.

"The *Comet*'s up there on the tower landing-deck. And we didn't come to see you off. I came to dissuade Joan from going." A bell rang sharply from the big black ship that loomed into the darkness nearby.

"Nearly take-off time!" warned Ezra Gurney.

"Better say your goodbyes, Joan."

Joan's brown eyes danced as she kissed Curt quickly. "For once," she laughed, "it's I who am going to space while you stay behind and worry, instead of the other way around."

Curt Newton could not smile. He held her, loath to let her go.

"Joan, won't you listen --"

"Of course I'll listen -- when I get back from Cerberus!" the girl cried gaily, slipping out of his detaining grasp and running after Ezra toward the ship. "See you then, Curt!" She and the white-haired old marshal reached the gangway. A final wave of her hand, and she disappeared into the black vessel. "Why didn't you let me hold her back,

THE FACE OF THE DEEP

Chief!" demanded Grog. "You've got to treat women rough."

"Listen to Grog -- now he's setting up to give advice to the lovelorn!" exclaimed Otho witheringly.

Curt Newton paid no attention to the argument that instantly developed. Grog and Otho were always arguing, usually about which of them was the most nearly human. He didn't even hear them, now.

His eyes were upon the *Vulcan*. The last officers were going aboard. The bridge-room up at the nose

would go wrong now.

But Curt couldn't expel foreboding from his mind. The *Vulcan* this time was carrying the largest and most desperate cargo of convicts it had ever taken. There were men aboard it who would kill merely for pleasure, let alone to prevent their being taken out to the grim living death of Interplanetary Prison. And Joan Randall was one of the guards of those human tigers!

CURT NEWTON reached decision, swiftly as he always did. He wouldn't let Joan take such chances. If she insisted on going, then --



CAPTAIN FUTURE

of the long hull had sprung into light. Dock-hands were lustily knocking out the holding-pins.

The vessel, with its freight of scores of dangerous criminals, was about to take off on its long voyage. It would zigzag out through the Solar System for weeks, stopping at each planet to pick up more sentenced men. It would be a long time before it returned from the scabrous voyage.

There was nothing to worry about, Captain Future told himself earnestly. The ship had made this voyage to Cerberus many times before, and nothing had ever gone wrong. Surely nothing

"I'm going, too!" Captain Future said suddenly. He plunged toward the gangway of the ship. Over his shoulder he called to his astounded comrades, "Take the *Correl* back to the Moon and wait for me!"

The gangway was already being drawn in. But the Patrol officers inside halted it as they saw Captain Future racing toward them.

The rangy, red-haired planeton raced up the metal gangway and stood pantingly inside the airlock. The Patrol men looked at him amazedly.

"It's all right," Curt laughed. "I'm going with

you, this trip. There's no objection, is there?"

"Objection?" The swarthy young Mercurian lieutenant flushed with pleasure. "Objection to *you* coming along? I'll say there isn't!"

His eyes were sparkling with excitement. To this young lieutenant, as to most space-men, Curt Newton was an idolized hero.

"I'll inform Captain Theron that you and the Futuermen are aboard, sir," he told Curt eagerly.

"That I *and* the Futuermen?" Curt repeated, turning swiftly. In the airlock were Otho and big Grog and the calmly poised Brain.

"What the devil!" exploded Captain Future. "I told you to go back to the Moon with the *Comet*."

"The *Comet*," Otho answered coolly, "is safe enough, locked up atop Government Tower. We're going with you. You're not going to leave us sitting on the Moon, twiddling our thumbs and waiting for you."

"Thus is what women get you into," growled Grog gloomily. "Now we're stuck on this craft for weeks."

"It is certainly annoying that I shall have to spend all that time in a ship that does not even have a decent research laboratory," said the Brain solemnly in his rasping, metallic voice.

Captain Future was not deceived by their grumbling. He knew that it was loyalty to himself that had made the Futuermen instantly follow him.

The tie between himself and the three strange comrades was old and deep. It went back to his infancy. For when his own parents had met death in their laboratory-dwelling on the lonely Moon, it was these three strange beings who had become his foster-parents.

The Brain, who had been his dead father's colleague in research, the robot, who had been created as an experiment by the two colleagues, and the android, who had been similarly created -- these three had first been Curt's tutors and guardians, and then his comrades in the crusading adventures which had won him the name of Captain Future. They had followed him faithfully to far stars and worlds. They were following him now.

"Oh, all right," Curt said, dissimulating his feelings. "But you'll find this a pretty dull voyage."

"I wonder?" replied the Brain, his strange lens-eyes fixed thoughtfully on Curt's face.

The *Vulcan* suddenly lurched upward with a roar of bustling rocket-tubes. They clung to stanchions as the ship took off. Swiftly, it screamed up through

Earth's atmosphere into the vast and shoreless sea of space.

The young Mercurian lieutenant started with them through the ship toward the bridge-room. As they left the airlock, they met Joan Randall. Her jaw dropped locklessly at sight of them. Then her eyes grew stormy.

"You came along? As though I were a baby who needed watching over! Curt Newton, I won't stand for it!"

"Afraid you'll have to, darling," grinned Curt. "We're already at least ten thousand miles away from Earth."

She was still protesting indignantly as they went forward through the mid-deck of the ship. This was the prison-cell deck. Along its main corridor were the barred doors of scores of cells. From behind the bars, convicts glared like caged wolves as they passed.

A SQUAT, evil-faced Jovian in one of the cells set up a roar as he saw Curt and his comrades pass.

"It's Captain Future, mates!" he shouted. "*He's* aboard!" A raging tumult instantly arose. Threats, maledictions, oaths, were hurled at the Futuermen as they passed along the corridor.

Not a criminal in the System but had good reason to hate the name of Captain Future. He had sent many an evil-doer out to the gray inferno of Interplanetary Prison to which these men were destined.

The tumult rose. The senseless shrieks of the madman Rollinger added wendly to it. Captain Future's bronzed face was coolly imperturbable as he strode along. He seemed unaware of the raging voices. Then as he glimpsed a sudden flash of movement beside him, he yelled a warning.

"Look out -- you pistol!" he cried to the Mercurian lieutenant.

A Venusian convict in one of the cells had hauled out through his barred door a little noose improvised from his belt. The loop had settled around the hilt of the Mercurian lieutenant's belt-weapon. The Venusian tugged hard, snatching the atom-pistol toward himself as Future shouted.

Captain Future sprang and charged that cell-door with superhuman speed. The Venusian had got the pistol into his hands. His blazing black eyes looked over its sights at Curt, with deadly purpose.

Curt ducked and flung up his hand in an oddily slung gesture at the convict's arm. The crash of

blasting white fire from the atom-pistol grazed over his head and fused a patch in the metal ceiling.

Next moment, Curt had got hold of the Venusian's arm through the bars and had wrenched hard. The gun clattered to the floor. He picked it up and grudgingly returned it to the scared young Mercurian lieutenant.

"Next time, keep your holster buttoned when you walk through this fox corridor," Curt advised him meaningly.

"Next time I'll get you, Future!" hissed the Venusian convict, nursing his wrenched arm and glaring his hatred through the bars.

"It's that devil, Moremos," volunteered the shaken young Patrol officer. "Only he would have thought of a trick like that."

"Oh, Curt -- I wish you hadn't come," breathed Joan. Her brown eyes were shadowed by dread. "They all hate you so terribly."

Raging threats were following Curt Newton and the others as they went on along the prison-deck. But the bellowing order of a huge Martian in one of the cells put a period to the tumult.

"Silence, you space-scum!" roared the big scarred-face red convict. "You hear? Kim Ivan orders it."

The uproar quieted almost magically. It was as though all the convicts recognized authority in the notorious Martian pirate's command.

But one voice remained unquieted. The uncanny slunk of John Rollinger still reached their ears as they left the prison-deck.

"There's death here!" the mad Earthman was still screaming. "I tell you, there's death on this ship!"

Attacked



THE *Vulcan* was no more than a billion miles from Neptune when the real trouble came.

For many days, the black ship had dived out through the System on a zig-zag course. At Mars, Jupiter, Saturn and Uranus it had stopped, to pick up more sentenced criminals. Now, with more than two hundred convicts aboard,

it headed for Neptune, the last stop before reaching Pluto and the prison moon.

Nothing untoward had yet occurred to justify Captain Future's premonition. The convicts imprisoned down in the cell-deck had growled and grumbled, but seemed reconciled to their grim fate. Yet Curt Newton had not been entirely reassured. Upon the first day of the voyage, he had voiced his doubts.

"They're *too* quiet," he declared. "They shut up like mice when that fellow Kim Ivan ordered them to."

"Well, that there big Martian swings a lot of weight with them," dawdled Ezra Gerney. "He was one of the biggest pirate leaders before the Patrol caught him."

"Even so, that bunch of tough criminals wouldn't obey him now without a reason," Curt insisted.

"You think they've hatched up some scheme of escape?" asked Captain Theron anxiously.

Captain Jhel Theron, who had command of the navigational operation of the *Vulcan*, was a veteran of the Patrol. He was a tall, grave-eyed Uruman, bald like most of the men of that planet, his sallow skin darkened by years of exposure to the unsoftened radiation of space.

He and his next of rank, Lieutenant K'kan of Mars, commanded an operational crew that comprised three pilots, a chief engineer and two assistants, three space-mechanics and four deckhands.

Distinct from these fifteen members of the operational crew were the guards of the convicts.

Marshal Ezra Gunney was guard-commander, with Joan Randall and young Rih Quli of Mercury as his sub-officers. They commanded eight non-coms of the Patrol, who watched over the convicts.

Curt Newton and the Futuremen had gathered with Ezra and Joan and the captain in the chart-room just abaft the bridge.

"I don't say Kim Ivan is plotting anything," Curt answered the captain's question. "But I do say that if he had something in his mind, he'd prevent the convicts from staging any premature outbreak — as he has."

Ezra Gunney snorted. "Cap'n Future. I got all the respect in the world for your judgment, but this time I think you're chasin' comets. How the devil can Kim Ivan or anybody else pull off anything, when they're locked up tight in cells that they won't leave till we reach Cerberus?"

"Men can get out even a chaomoloy cell, if they have the right tools," Curt answered significantly. "And men like Kim Ivan and that snake Moremos had criminal friends who would have been glad to smuggle things to them."

"Not a chance!" Ezra affirmed. "I'll stake my life that not one of those space-scum has any kind of tool or instrument."

"You searched them when they were brought aboard?" Curt asked.

"What kind of amateur outfit do you think the Patrol is?" Ezra demanded indignantly. "O' course we searched them. We used the X-Ray 'scanner' on each convict as he was brought into the ship."

"Did you 'scan' the cells, too, to make certain that nothing had been planted in them?" Captain Future asked keenly.

"No, we didn't do that, but there wasn't any need to," the old marshal declared. "The Vulcan was always under guard, and nothin' could have been planted in her."

"Nevertheless, I'd like to use the 'scanner' on the cells now," Curt said. "Any objection?"

"Oh, no, if it'll ease your mind any," growled Ezra. He glanced winkingly at Joan as he added, "You're sure takin' a lot of precautions, Cap'n Future. Must be somebody aboard you're worried about."

GRAG and Otho, bored by the discussion, had got into one of their interminable arguments. Curt left them with Joan, and went down with Captain Theron and Ezra and the Brun

to conduct his inspection.

The *Vulcan*, as a former small liner, was built along standard lines. It had three main decks, one above the other. Top-deck held the big bridge-room, the operational and chart rooms, and officers' quarters. The little cabins occupied by the Patrol officers and by the Futuremen were in the rear part of this deck.

The mid-deck, which had formerly contained passenger cabins, had been redesigned into a cell-deck. Entrance to it was only through two massive chaomoloy doors, one fore and one aft. Both were locked and had guards posted outside them at all hours.

The eye-deck, as the lower deck of a liner was usually called, was a noisy, crowded place. Its fore part was crowded with fuel tanks and supply-rooms, and the whole stern of this lowest deck was the big eye-room in which the huge atomic generators dived away to feed streams of atomic power to the great rocket-tubes.

Captain Future and Simon and the captain followed the old marshal down the zigzag companionway to the fore door of the mid-deck. It was locked, and two armed Patrol officers stood guard outside it.

"Open her up an' bring the X-Ray 'scanner'," Ezra Gunney drawled to the guards. "We're goin' to run a little inspection."

The "scanner" was brought by one guard while the other unlocked the massive door. The instrument looked like a powerful searchlight, beside which was mounted an eyepiece that resembled binocular tubes.

When Curt Newton entered the cell-deck corridor with the others, a low, muttering growl ran along the crowded cells. It quickly subsided, but the caged criminals glared in silent hate at the tall, redhaired planeteer who was the greatest enemy of their kind.

"You can see that these cell-doors can only be opened by the outside control," Ezra Gunney was saying to Curt. "Furthermore, this whole deck, like the other compartments of the ship, can be exhausted of air by the master-valves up in the bridge-room. If these fellows started anythin', we could kill 'em all in five minutes and they know it."

"You certainly must admit that there is no chance of a break here, Captain Future," said Captain Theron relievedly.

"It's a good, tight set-up," Curt admitted.

"Nevertheless, I'd like to 'scan' the cells. Wheel the machine along, will you, Ezra?"

He began his X-Ray inspection of each cell along the corridor. The searchlight projector of the scanner flooded each cell in turn with invisible Roentgen rays. Through the fluoroscopic eyepiece, Curt Newton could have seen the tiniest scrap of metal in the cells.

But there was nothing. The gray-clad convicts had not even any metal in their plastic belt-buckles or shoes. Even their dishes, water-jugs and eating utensils were of soft fiber or unbaked clay.

Curt paused as he reached John Rollinger's cell. The mad Earthman had been confined in a cell to himself. He sat muttering in a corner, paying no attention to Captain Future's inspection.

"Hello, Rollinger -- how are you feeling?" Curt asked him.

The ex-scientist stared at him, but made no answer. His haggard face and peculiarly burning eyes gave them all a creepy sensation.

"Hate to see a man with his mind shot like that," muttered Ezra in a low voice. "Specially, a man as brilliant as he was."

John Rollinger had been a famous biophysicist, Curt knew. He had specialized in encephalographic research, testing the effect of various forms of radiation upon the human brain. Boldly using himself as a subject, he was supposed to have shattered his mind in his experiment.

"I wonder if he's really as mad as he looks," Captain Theron said skeptically. "The prosecution at his trial maintained he killed his colleague in a quarrel, and then used faked insanity to excuse himself."

"Well, if he's faking, it hasn't done him much good," Ezra shrugged. "They sentenced him to Cerberus just the same, for a homicidal maniac has to be locked up just the same as a deliberate killer."

MOREMOS, the slender and wiry Venusian murderer in the next cell, glared at Captain Future in silent hatred as his cell was "scanned."

But Kim Ivan, the big, battered Marthan who shared a neighboring cell with Bonaboll, fat Uranian swindler, greeted Curt with a calm grin.

"Nice of you to come down and visit us boys, Future," said the big pirate. His froglike grin deepened. "Looking for something special?" Curt scanned that cell twice running before he answered.

But there was no tool, instrument or tiniest scrap of metal anywhere in it, nothing whatever hidden. He looked up at the grinning pirate.

"You've kept things here pretty quiet, Kim," he remarked. "You seem to have the others pretty well under control."

"Sure, I won't let 'em start any trouble," Kim Ivan affirmed. "I'm a peace-loving man, that's why."

Ezra snorted. "A peace-loving man who led the biggest pirate band since Rok Olor was on the loose?"

The big pirate laughed. "Aw, that's all over and done with now. I tell the boys, what's the use of beating our brains out against these bars, when all it'll get us is six months' solitary when we reach Cerberus?"

Curt Newton finished his close inspection of the cells. When they had gone back of the cell-deck, and its massive door was again locked and under guard, Ezra Gurney challenged him.

"Didn't find anything, did you?"

"No, not a thing," Curt admitted. "There's no tool or weapon of any kind hidden in those cells, that's sure."

"We Patrol men ain't as sleepy as you seem to think," the old marshal told him. "Those birds are safe till we reach Cerberus, never fear."

His apprehension somewhat dispelled, Curt had felt less worried about Joan's safety during the long days of the voyage that followed. At each world where they stopped, the new prisoners brought aboard were thoroughly scanned. But no attempt to smuggle tools or weapons was detected.

Now they were drawing near to Neptune. The eighth planet was still more than a billion miles ahead, but that was only a few days of travel at the great speed with which the *Vulcan* was flying through space.

At dinner in the officers' mess that "evening" before the night watch, Ezra commented upon their approaching stop at the Water World.

"Remember last time you Futuemen an' Joan an' I were out here, Cap'n Future?" It was when we were after the Wrecker."

Curt nodded grimly. "I'm not likely to forget what happened to me on Neptune that time, up in the Black Isles."

"Can you tell us about it, Captain Future?" eagerly asked Rih Quili, the young Mercuran lieutenant, with hero-worship in his voice.

"Some other time," evaded Curt, unwilling to

recall near-tragic memories

"We've all finished dinner now."

"I ha-haven't finished my p-p-prunes," hastily stuttered George McClinton, the chief engineer.

There was a burst of laughter. McClinton, a lanky, spectacled, stammering young Earthman, was the butt of constant jokes because of his inordinate fondness for prunes. He always kept his pocket full of dried ones, which he munched ceaselessly as he supervised the eye-room.

"If we wait till you have enough prunes, we'll be here forever," Ezra said dryly, getting up. "I'm going to turn in."

When Curt and Joan and Otho went to the budge-deck, they found Grog leaning against a section of glassite window and looking disconsolately back toward Earth. The big robot turned to them.

"I wonder how Eek is getting along, back home," Grog said anxiously. "I wish I had brought him with me."

EK was a queer little interplanetary animal that was Grog's mascot. Otho had a somewhat similar pet, which he called Cog. Both pets had been left in the Futurmen's Moon-laboratory when they had flown to Earth on the errand that had unexpectedly resulted in this long voyage.

"Eek will be all right, Grog," reassured Curt. "The automatic feeding-arrangement in the Moon-laboratory will keep him fat and happy."

"I know, but he'll nearly die of loneliness because I'm not there," Grog affirmed. "He's such a sentimental little fellow."

"Sentimental?" That miserable little moon-pop?" cried Otho jeeringly. "Why, all that little pest knows is to eat and sleep. He has about as much sentiment in him as a Venusian fish."

Grog swung wrathfully on the android. "Why, you cockeyed rubber imitation of a man, if you slander little Eek like that again, I'll --"

Captain Future and Joan, chuckling, left them to the inevitable argument which might go on now for an hour. It was the favorite method of passing time for Grog and Otho, to find new insults for each other. Curt and the girl went back to a deck-window out of earshot.

The silence of the night watch reigned over the ship. Its eyes and rocket-tubes had been cut, for its speed of death was now great. In an unnatural

stillness the *Vulcan* rushed on and on through the vast star-decked vault toward the distant green speck of Neptune.

The vista from their window was a magnificent one. The golden eyes of a million million suns steadily watched the soundless rushing ship. Jupiter was a white blob away back to the left, and the sun itself was only a little, fiery disk far astern. Far out in the void, they could glimpse a tiny red light creeping Sunward across the starry background.

"That will be the bi-weekly Photo-Earth liner," remarked Curt Newton.

Joan's brown eyes watched wistfully. "Don't you wish we were aboard her, Curt? There'll be lights, music, dancing."

Curt looked down at her. "What's the matter, Joan? Is this trip getting on your nerves?"

She smiled ruefully. "A little, I'm afraid. We're so different from any other ship, with our cargo of human misery and hate. I wake up sometimes dreaming that the *Vulcan* will sail on like this forever."

Curt nodded soberly. "Like the dead space-ship in Oliver Owen's poem. Remember?"

*"Darkling she drifts toward the
outer dark
Silently falling, into eternity!"*

"Beautiful, but depressing," Joan said, with a little shudder. She turned away. "I'm going to turn in, too. I have the guard-command in the next watch."

Captain Future went back to his own little cabin. The Brain was there, his square case resting quiescent upon a small table. But Simon did not look up or speak when he entered. His lens-eyes stared unseeingly.

Curt knew that the Brain was deep in one of his unfathomable reveries of speculation. Simon's cold, intellectual mind could lose itself for hours in contemplation of scientific problems. It was his method of relaxation when he had no laboratory for his endless researches.

Curt Newton slept soundly. Yet when he suddenly awakened an hour later, it was with every nerve thrillingly alert. He listened. The big ship was still rushing silently on through the vast depths of space.

Then to his ears came suddenly the sound of distant yells and the crash of atom-guns. Instantly

Curt was out of his bunk and plunging across the cabin toward the door.

"Something's wrong! If the prisoners —"

The words died on his lips as he burst out into the corridor. A mass of gray-clad convict were pouring into the fore end of the passage. In their front rank was Morenos, the Venusian murderer, grasping an atom-gun.

He aimed instantly at Captain Future. And Joan Randall, who was emerging hastily from her cabin, was plunging directly into the line of his aim.

CHAPTER III

Jailbreak



DOWN in the cell-deck, a few hours before, an odd atmosphere of tension gripped the scores of prisoners as the night-watch began.

The massive doors at the fore and aft ends of the deck had been and locked by the Patrol officers, who were now standing guard, outside them. A few quaint bulbs in the ceiling cast a vague, dim light upon the shining chromalloy bars and the shadowed, brutal faces behind them.

The hissing whisper of Morenos traveled along the row of barred doors. The Venusian's sibilant voice was silyly vicious as he addressed the big Martian pirate in a neighboring cell.

"We're just three or four days out of Neptune — I heard a guard say so today. I thought you were going to get us out of here before we reached Neptune, Kim Ivan?"

"Yes, what about it, Kim?" asked a squat Jovian killer's mumbly voice. "You've been telling us all the way to keep quiet and that you'd manage a break, but you haven't done anything yet."

"He's just been stringing us along to keep us quiet," accused the quavering voice of a white-haired, ruf-chewing Saturnian, a hoary old sinner named Thaddeus Thum. "I'll lay that the Patrol men put him up to giving us that story."

A fierce, low babble of accusations, threats and demands instantly arose from the prisoners. All

were addressed to the big Martian.

Then Kim Ivan's deep voice cut through the babble, in low, harsh command. "Cut your blasts, you chattering space-monkeys! Do you want the guards coming in here?"

The authority in his voice, the authority that had made this towering Martian one of the great pirate leaders of his time, again silenced them.

"I said I'd stage a break, and I will," Kim Ivan continued harshly. "And what's more, tonight's the night for it."

An electric spark of excitement seemed to leap along the crowded cells at his statement. The voices broke out again, but in eager questions now.

"What's your plan, Kim? How are you going to get us out of these cursed cells?"

"You'll soon find out," the big Martian promised. "Now shut off your eyes and keep quiet while I start."

The prisoners instantly became still, though all pressed against the bars of their cells in a surge of sudden hope. The only sound was the low, monotonous muttering from the cell of John Rollinger.

Kim Ivan turned to his cell-mate. His fellow prisoner was Boraboli the swindler, a fat Uranian whose moon-like yellow face was ludicrous as he gaped at the big Martian.

"Kim, can you really do it?" he squeaked. "How are you so much as going to get out of this cell, when you have nothing to work with?"

"I have all I need," Kim Ivan replied. "My old pals on the outside smuggled the stuff to me, before we ever left Earth. It's hidden right here in the cell with us."

"Are you crazy?" gasped Boraboli. "There's nothing hidden in here, not so much as a pin. The X-Ray scanner would have detected it if there was."

"The cursed scanner wouldn't ever find my equipment," Kim Ivan replied, with a chuckle. He was stripping off his gray convict jacket, and there was a look of triumph on his massive, battered face as he added, "I've got wit enough to outsmart the Patrol, every time."

Boraboli watched him, open-mouthed. The big Martian had filled the biggest of them soft food-dishes with water from the fiber jug. Now Kim Ivan tore a sleeve off his jacket, and bent over the dish of water.

"Cell-crazy!" muttered the fat Uranian to himself with sudden conviction. "He's gone clear cell-crazy."

"He's as delicious as Rollinger."

Kim Ivan wadded up the sleeve of his jacket and thrust it into the dish of water. He turned around, with a sharp command.

"Now hand me that salt." Pryingly, Boraboll handed him the little fiber container of salt. Kim Ivan took it and squatted down, waiting and watching the dish.

Gradually, a curious change came over the water in that dish. It turned blue, as though it had dissolved some dye or chemical in the jacket-sleeve that was immersed in it. Kim Ivan waited until the water was a dark blue color, before taking out the wadded sleeve.

"Now the reagent," muttered the big Martian, and poured a carefully estimated quantity of salt into the dark blue liquid.

The blue liquid began to seethe and boil, and turned dark purple. Kim Ivan's massive face flashed a light of triumph.

"It works!" he muttered exultantly. "Boraboll, we're as good as out of here right now."

"But what is that stuff?" Boraboll stammered, looking bewilderedly at the seething purple liquid.

"It's an acid that eats through the toughest metal as though it were cheese," the big Martian retorted. "The basic elements of the acid were mixed by a smart outside chemist into a gluey mixture that was soaked into a regulation convict jacket, and then dried. The jacket was smuggled in to me by my outside pals, along with plans of this ship."

He chuckled as he added, "The scanner couldn't show the chemicals soaked into my jacket. But they needed only to be dissolved into water, and then to have ordinary sodium chloride added to the solution, to form one of the most powerful metal acids known. Now watch it work!"

Kim Ivan picked up the vessel of seething liquid, and carefully poured a trickle of it upon the crossbars of the cell's barred door.

The purple liquid foamed and hissed, eating swiftly into the tough claustrous bars. Careful to avoid splashing himself with the acid, the Martian prate continued the operation. In a few moments, the crossbars were eaten through. He put down the bowl of acid, and lifted out a whole section of the door. Then he squeezed out into the corridor.

"Kim, how did you do it?" came the excited, wondering exclamation of Grabo, the squat Jovian criminal across the corridor.

"Can you get the rest of us out, too?" Moremos

asked swiftly. A chorus of amazement and excited hope was rising from the rest of the convicts. Kim Ivan quieted it with a wave of his big hand.

"Take it easy! I'll soon have you out of those cursed cages."

The cell-doors did not have individual locks. They were all secured by a master electro-lock whose controls were outside the cell-deck.

But Kim Ivan knew what he was doing. He secured his receptacle of purple acid and stooped over a certain section of the corridor floor.

"The main wiring for the electro-locks runs under here," he muttered. "If the ship plans my pals sent me are right."

He used a trickle of the acid to burn out a two-foot section of the metal floor-plate. Thus exposed the tangle of wiring inside the floor. Kim Ivan studied it for several minutes, then began working with the wires.

Presently, his work bore results. With a loud clacking, all the locks of the scores of cell-doors drew their bolts. He had actuated the master control of the locks.

The convicts swarmed instantly out into the corridor. Brutal faces of Earthmen, Venusians, Jovians, Saturnians blazed with fierce hope.

"You've done wonders, Kim," Moremos applauded tensely. "But now what?"

"Now," answered the big Martian with a flash in his eyes, "we're going to seize the ship! Then ho for freedom!"

"The Patrol will hunt us down no matter where we go, once they find out we've seized the *Vulcan*," muttered fat Boraboll doubtfully.

"Don't worry, I've got a plan," reassured the Martian. "The Patrol will never catch up to us where I'm figuring on going."

Tullius Thum, the hoary old Saturnian prate, spat *real* juice on the floor and demanded, "How're we going to grab the ship? We're locked on this deck, with Patrol men on guard outside both doors."

Kim Ivan grinned. "There's another way out of here. The ship-plans showed that when this craft was a liner, it had an emergency escape-hatch leading from this passenger-deck to the top-deck. The hatch was walled shut when they made this a prison ship. But I know where it is."

HE APPROACHED a blank section of metal wall between two cells midway in

the main corridor. Motioning the others peremptorily to stand back, the Martian poured his remaining purple acid upon that wall.

The liquid hissed and burned into the metal panel. In a few moments, it had eaten out a big section. Through the hole they looked into a dark, small escape-hatch whose ladders ran up toward the top-deck.

Kim Ivan faced the swarming, eager convicts grimly. "Now listen to me. I'm running this show, and anyone who doesn't like that can speak up right now."

There was no challenge to the authority of the towering, hard-faced Martian pirate. But a shrill voice back in the throng laughed wildly.

"It's only that crazy Rollings," muttered Morenos. He viciously shoved the stung, maddened Earthman back into his cell.

"Thus hatch will let us out into the forepart of the top-deck," Kim Ivan continued rapidly. "We'll jump first on the ship officers on duty in the bridge and chart-rooms. Once we have their guns, we can overpower the others before they're awake enough to know what's going on. But no massacre — understand?"

Morenos' green face stiffened. "You mean we're not to blast down that devil Captain Future?" He and his cursed Futuremen have sent plenty of our pals to Cerberus!"

A low growl of agreement came from the other convicts.

"You blockheads, they are the most valuable hostages we could have aboard, if we're not fools enough to kill them!" lashed Kim Ivan. "And we may need hostages once the Patrol starts hunting us."

His gun reminder silenced them. "Now come on!" the big Martian exclaimed. "If luck's with us, we'll pull off a feat that'll go down in pirate history!"

The mutineers poured up the escape-hatch after their big leader. Kim Ivan opened the unsealed door at its top, and they emerged with a sudden rush into the top-deck just behind the chart-room.

Two pilots were on duty in the bridge ahead, and Lieutenant K'kan was checking the drift-gauges in the chart-room. The young Martian second officer turned, appalled, and then reached swiftly toward an alarm-button.

Kim Ivan's belled fist knocked him senseless before he could press the button. Old Tuhilus Thunur

eagerly snatched up the officer's atom-pistol.

"Get that pilot, Grahb!" yelled the Martian leader furiously.

One of the two pilots had evaded the Jovian criminal and his group who had burst into the bridge. The pilot, with a yell, was dashing back through the chart-room to escape.

Crash! The fiery blast from old Tuhilus Thunur's gun cut the man down in mid-stride.

The old Saturnian cackled. "Ain't my aim yet! First man I've led down for two years."

"You old fool, there wasn't any need that!" raged Kim Ivan. I told you to —

Crash! Crash!

"Where the devil's the Morenos?" cried the Martian furiously, striding hastily back toward the main corridor of the top-deck.

Boraboll answered, his moon-like yellow face muddied with fear. "Morenos killed Captain Theron with his own gun! He and the others have gone back for the Futuremen!"

"I might have known that murderous Venusian couldn't hold his trigger!" roared Kim Ivan. "Come on!"

They burst into the top-deck longitudinal corridor, stumbling over the slain bodies of Captain Theron, a Patrol guard and a deck-hand.

CHAPTER IV

Trapped



A TENSE tableau met their eyes. Ahead of them, Morenos and a half-dozen other mutineers were charging the stem corridor. Captain Future's tall figure had just burst out of his cabin, and the Venusian murderer was raising his gun to fire at the hated planetee.

Curt Newton's draw was the swiftest in the Solar System. His proton-pistol came out of his holster with the speed of light. Yet he could not fire, for Joan at this moment emerged into the corridor. She was between him and the Venusian.

"Joan, get back!" he yelled to her. She hesitated

dazedly. Curt couldn't fire at the Venusian while she stood between them. But Morenos, who had no interest in the girl's safety, was going to shoot!

Curt's desperate expedient came with such lightning speed that it seemed an instinctive reaction rather than a deliberate decision.

He fired the blazing white bolt of his weapon, aiming at the metal wall of the corridor *beside* Joan. Most of the energy of the oblique blast burned into the wall. But a part of that blazing blast of force was reflected and deflected on along the corridor toward the nutmeats.

The deflected blast was not strong enough to be fatal. But it was enough to scorch and daze Morenos and the others. They recoiled.

Captain Future lunged forward, swept Joan behind him, and triggered swiftly.

His blasts cut down two of the men beside Morenos. The Venusian and the others hastily darted back out of the corridor.

"Holy space-nips, what's going on?" It was Otho, his green eyes blazing and his proton-gun in his hand, who had emerged with Gtag from the cabin they shared. Ezra Gunney, too, was scrambling startledly out.

"Mutiny!" Curt Newton cried. His voice was better with self-reproach. "Just what I feared, and yet I let it happen."

YOUNG Rah Quah, the Mercenian lieutenant, and another Patrol officer had wakened and come out to join them.

A stentorian voice echoed back to their little group from the fore part of the top-deck. It reverberated along the corridors.

"Future, will you and the others surrender? You haven't got a chance. We hold the bridge and couch of the ship."

"That's Kam Ivan," growled Ezra. His thin hand clenched upon his atom-gun and he started forward. "I'll show that cursed Martian!"

Gtag and Otho started forward with him, but Curt Newton held them back. "Don't be foolish! There're scores of convicts up there and they've got all the guns in the arsenal by now. They'd get us no matter how many of them we got fast."

He glanced swiftly around, his gray eyes snapping. "We can't stay here. They'll come up the aft companionway, and then they'll have us caught between them. We'd better retreat down the aft star to the eye-room. If we can hold the eye-room against them, we'll get the upper hand over them

yet."

"I get it!" exclaimed Otho. "If we hold the eye-room, we can keep the eyes shut off and prevent them from taking the ship anywhere save Neptune."

Hastily, the little party entered the aft companionway and went down its short, zigzag stair to the lowest deck of the *Vulcan*.

The big eye-room took up the whole rear half of this deck. It was crowded with machinery -- the huge, massive, cylindrical cyclotons, the tangle of fuel pipes and power-leads, the squat generators of the auxiliary drive whose vibration-thrust was used only in emergencies.

George McClinton ran bewilderedly toward them. The lanky young chief engineer had apparently just been aroused from his nearby bunk by the Neptunian engineer on duty. He was automatically popping a dried prune into his mouth, as his spectacled eyes blinked at them amazedly.

"Wh-wha's going on?" he stammered. "Otluk says that he h-h-heard shooting --"

"The cursed convicts have grabbed the bridge-room and upper decks!" answered Ezra Gunney, his faded eyes still raging.

CAPTAIN FUTURE was snapping orders.

"Gtag, you and Rah Quah lock the fore door and watch it. Otho, take the aft door."

"You're not h-hurt, are you, M-m-mass Randall?" the prune-loving engineer was asking seriously of Joan.

"I'm all right," she said. "But I've failed in my duty. This is the first time there has ever been a break on the *Vulcan*."

"It's more my fault than yours on Ezra's," Curt said bitterly. "I felt all along that that desperate bunch might try something. That's why I came along and took all the precautions I could. But they somehow outsmarted me."

There was a loud hammering at the fore and aft doors of the eye-room. The nutmeats had apparently discovered the whereabouts of the group.

"They can't break in here," Ezra muttered hopefully. "They know if they do, we'll blast 'em down as fast as they come through the door."

Curt was searching the crowded eye-room with intent gray eyes. "Are there any space-suits down here?" he asked McClinton.

"N-n-no," stammered the lanky engineer wonderingly. "Suits aren't ever kept down here, for there's n-no need for them here."

"We'll need them pretty quickly, if my guess is right," Curt exclaimed. He pointed at two big valves inset in inches in the thick wall of the eye-room. "Those are an-exhaust valves, controlled from the bridge-room. They're part of the valve system designed to make possible the exhaustion of air from any section of the ship."



OTHO

"Good God, I forgot all 'bout those exhausts!" cried Ezra, aghast. "They were intended to enable the ship's commander to quell any convict mutiny in any part of the ship. If the convicts learn about 'em and turn 'em against us--"

"They will, and quickly," Curt snapped. "That Kim Ivan seems to know all about this ship. Can we fix those valves to keep them from being opened?"

"There's n-o-n-o way!" answered McClinton,

paling. "Operation of the v-v-valves is all by r-remote control through w-wires in the w-walls."

"Then we've got to weld metal patches over the valve-niches -- and quickly!" Captain Future cried. "You've got atomic welding-torches here? Get them out, and bring some sheet metal stock."

As they started to work with the sputtering atomic torches to cut metal patches that would seal the exhaust-valve openings, the hammering on the doors ceased.

Ging, Otho, Rah Quah and Ezra remained on guard inside those doors while Curt and McClinton worked hastily.

Before they had even cut out the first metal patch, a loud voice bellowed through the eye-room. It came from the interphone that connected with the bridge.

"Captain Future!" it bellowed.

"This is Kim Ivan talking. We've taken the whole ship except the eye-room. You haven't a chance. Unless you open the fore door and toss out your atom-guns, I'm going to open the eye-room exhaust-valves."

"That Martian devil!" grunted Ezra Gurney furiously. "He knew about the valve-system, all right."

"What about it, Future?" bellowed the Martian's voice. "I'm going to give you two minutes. Unless you agree by then, the valves open!"

Stricken by the threat, the others looked at Curt. His bronzed-face was a taut mask as he assessed their hopeless situation.

THEY could not seal the deadly valves in two minutes. That job would take a half hour, at least. Long before they finished it, the valves would be opened and the air would puff out of the eye-room, slaying them all.

"They've got the doors locked on the other side now, chief!" Otho reported.

"So we can't come out fighting," Curt grunted. His eyes swung to Joan. Then he stepped to the interphone. "Captain Future speaking, Kim Ivan! What assurance have we that if we do surrender you won't blast down every one of us?"

"If I wanted to kill you, I could do it right now by opening the eye-room exhaust valves," retorted Kim Ivan. "I want to keep you for hostages. If the Patrol catches up to us, you'll be valuable to us. I gave you my word that if you surrender, none of you will be harmed."

Curt looked at the others in his silent group. "You all heard. What's your decision?"

"Looks like there ain't any choice," muttered Ezra somberly. "We can either die right now, or accept Kim Ivan's proposition. It's to his interest to keep us alive as hostages, all right. Aa! black-hearted pirate though he is, he's got the reputation of keepin' his word."

Captain Future and the Futuramen might have taken their chance and refused surrender, by themselves. But to sentence Joan to death?

Curt's mind was decided by the threat to the girl. He turned and spoke slowly into the interphone. "All right, Kim Ivan. We agree."

THE words were bitter in his mouth. It was almost the first time the Futuramen had acknowledged defeat and made quiet surrender.

Otho's eyes were blazing, and Grog's huge metal figure was still rigidly ready for action.

But the Brain's chill, logical mind approved. "It is all we can do," rasped Simon. "While we live, we have a chance of reversing the situation."

Curt unlocked the fore-doc, which had now been unbolted outside also. Silently, he cast their atom-guns out onto the landing.

Instantly, convicts appeased out there and snatched up the weapons. Then the fierce, exultant crowd swarmed into the eye-room with Kim Ivan's towering figure leading them.

The big Martian's battered red face was jovial with high good humor at his success. But Moremos, the Venusian, glared at the Futuramen with a hatred reflected on the fierce faces of most of the other mutineers.

Curt ignored the threat in their tigerish stare. "What have you done with Captain Theron and the others?" he demanded.

Kim Ivan looked uncomfortable. "They're dead, all except four crewmen. I told the boys there didn't need to be any killing, but they didn't follow my orders. That's your fault, Moremos."

Moremos had a sneer on his emerald-hued face as he answered the Martian. "You're too chicken-hearted, Kim. If I had my way, we'd blast down all the rest of them right now. Why should we let Future and his pals live, when we've got a chance to wipe them out?"

The Venusian's venomous words kindled explosive agreement among the majority of the mutineers.

"Moremos is right!" roared Gargo, the squat Jovian. "Future and his bunch have sent lots of good lads to Cerberus. Now we can pay 'em off."

Kim Ivan's bull bellow rose above the fierce tumult. "I'm giving the orders here and I say we don't kill these prisoners."

His voice rang with contempt. "Are you all so thick-headed you can't see our danger? When the *Vulcan* fails to arrive at Neptune a few days from now, the whole Patrol will start out looking for it. If they overtake us, we'll have these prisoners as hostages."

His grim reminder of the Planet Patrol seemed to sober the mutineers somewhat. Every one of them had good reason to know the remorseless efficiency of that great organization.

"The Patrol will hunt us till they find us, all right," muttered fat Bonaboli nervously. "They'll comb the whole Solar System."

"They will," Kim Ivan agreed. "But they won't find us if you agree to my proposal. I propose that we leave the System altogether."

CAPTAIN FUTURE and his fellow-captives were as startled by that proposal as were the mutineers.

"Leave the system?" gasped Gargo, the Jovian. "What do you mean?"

Kim Ivan's eyes flashed. "I've thought it all out. If we stay in the System, no matter what wild moon or asteroid we hide on, the Patrol will finally find us. Our only chance is to leave this Solar System forever."

He swept his hand in a grandiloquent gesture. "Out there beyond Pluto's orbit is a whole universe for our refuge! Out there across the interstellar void are stars and worlds beyond number. You know that exploring expeditions have already visited the worlds of Alpha Centauri, and returned. They found those worlds wild and strange, but habitable."

The Martian's voice deepened. "I propose that we steer for Alpha Centauri. It's billions of miles away, I know. But we can use the amazing vibration-drive to pump this ship gradually up to a speed that will take it to that other star in several months. We have enough supplies for that long a voyage. Once there, we'll have whole worlds for our own! We can easily dominate the primitive peoples that were found on those worlds."

The sheer audacity of the proposition held the mutineers in stunned silence.

Then Curt Newton saw their faces kindle with

excitement

"Kim's right!" exclaimed Garbo. "If we stay here in the System we'll be caught and sent to Cerebus sooner or later."

"I say, let's go," smiled old Tullius Thawn. "The voyage may be long, but at the end of it there'll be whole new worlds to loot."

Bouboltz, the fat Uranian, looked scared. "We don't know what we'll run into out in uncharted outer space. It's a terrible risk."

"The risk is no greater than the one we'll run if we stay here in the System," Garbo retorted. "We're with you, Kim. It's starward ho!"

Stunned by dismay at what the daring decision meant to them, the Futuuremen and their fellow-captives heard the mutineers' fierce, excited chorus of agreement.

"Starward ho!"

CHAPTER V

Wrecked



SHUDDERING and creaking, the Vulcan hurried out into the great deeps of interstellar space at the highest speed of its rocket-tubes. Days ago it had crossed the Line, as the orbit of Pluto was called.

It was already more than four billion miles out into the vast abyss that stretches between the stars.

As yet the mutineers had not dared make use of the auxiliary vibration-drive. For the powerful propulsion vibrations of that mechanism set up a peculiar excitation of the ether which could be spotted at great distances by the instruments of the Planet Patrol. Not until they were still farther from the System could the high speed drive be safely used.

Down in the cell-deck, in one of whose cells he was confined, old Ezra Guiney gloomily considered their situation.

"We're a couple o' billion miles from the System now. Soon as we get a little farther, there won't be any chance o' the Patrol overtakin' us. Then we won't be any more use to these space-scum as

hostages."

"You think they'll murder us then?" asked Joan Randall carelessly from her own cell. "But Kim Ivan gave his word they wouldn't."

"I know, an' Kim Ivan would prob'ly keep his word, but the others won't," Ezra predicted pessimistically. "That snake Moremos an' the rest like him are just aclin' to put the blast on all of us."

Curt Newton, confined in his own separate cell, looked anxiously across the corridor at the barred door of Joan's cell.

"It's my fault, letting you in for this," he said meekly. "I was overconfident, and they tricked me neatly."

"You know that isn't so, Curt," Joan denied staunchly. "The Patrol was in charge of this ship, and we fell down in spite of all your warnings."

The shrill, insane laugh of the crazed Earthman scientist came from farther down the corridor.

"I said that there was death on this ship!"

They had been imprisoned here for days, ever since the mutineers' seizure of the ship. The electrolink cables had been repaired by Kim Ivan, and the Futuuremen and others had been confined in separate cells. Two mutineers armed with atom-guns constantly watched in the corridor.

There were fifteen of them imprisoned here. Beside the Futuuremen and Ezra and Joan, there were George McClinton, the stuttering chief engineer, and his two assistants, Rih Quah, the young Mercurian lieutenant, three space-lunks and one Patrol guardsman, and John Rollinger, whose insane babbling had so exasperated the mutineers that they had reconfin'd him.

"If ever I get my hands on that Kim Ivan," Grog's rambling voice threatened, "I'll tear him into little bits -- slowly."

"You'll do nothing of the kind!" promptly asserted Otho's hissing voice. "You'll simply watch while I give him the Venusian water-torture."

George McClinton, the lanky chief engineer, was arguing through his bus with them two guards. "I t-t-tell you, you've got to give me some p-p-prunes with my rahous! I'm s-starving for l-l-lack of them."

"Cut you blasts, all of you!" ordered the guards harshly. "You people are lucky just to be living yet -- you don't know how lucky."

Silence fell upon the dim-lit deck of cells. Captain Future squatted down against the front wall of his own cell, and seemed to doze.

Actually, Curt had never been more awake. His position concealed from the vigilant guards the fact that his left hand was twisting a rade little metal drill which was biting ever deeper into the metal floor.

Curt had not been idle during these days. From the moment of their capture, he had racked his brain for an expedient by means of which he might turn the tables on their captors. He had found one slim chance.

The control-cables of the master electro-locks ran beneath the corridor floor just outside his cell. If he could drill through the floor of his cell, out beneath its wall, he could short-circuit the cables as Kim Ivan had done, and thus unlock all their cell doors.

He had nothing to drill with. They had all been thoroughly searched with the scanner when they were locked in. His cell contained nothing but the fiber and clay dishes for food and water, and a flat metal bunk. But Captain Future had managed to unbolt one of the metal rods that supported his bunk. It was of harder metal than the floor.

PATIENTLY, Curt had shaped the end of this rod into a drill by grinding it against his bunk-edge. For days now, he had been using it to drill surreptitiously through his cell-floor toward the lock cables. He could work only in moments when the guards were not directly watching him. But his hopes were fast rising as he felt himself nearing the vital cables.

Suddenly the rough voice of Grabo, the Jovian, interrupted Curt's tensely hopeful work.

"Fetch Captain Future out of his cell," the Jovian pirate was ordering the two guards in the corridor "Kim Ivan's orders."

Curt Newton's heart sank. Had they discovered his secret labors?

His cell door was unlocked separately. He had already hastily secreted his drill by restoring it to position as a support of the bunk. Curt stepped obediently into the corridor, the two guards covering him with the guns.

The red-haired planeteer looked at Grabo with cool inquiry "What does Kim Ivan want with me?"

"You'll find out on the bidge," the Jovian answered harshly. "Get moving. One of you guards come along to cover him."

Grabo himself was not armed. Brawls among the mineers during the first days had resulted in so

many killings that Kim Ivan had decreed that only the guards of the prisoners should henceforth carry atom-guns.

Curt walked calmly ahead of the Jovian and the watchful guard, up to the bridge-room. Old Tullus Thunn was in the pilot-chair. The hoary Saturnian criminal looked nervous, and there was a worried expression on big Kim Ivan's massive red face. Morenos was arguing angrily with them.

The broad sheet of the pilot-window, above the complex instrument panel, framed a glittering vista of interstellar space. The firmament was a great drift of stars, amid which the white speck of Alpha Centauri shone like a beacon in a direction dead ahead.

Curt Newton's practised eyes, noticed at once the tiny red lights winking and flashing on the instrument-panel, and the buzzers whining.

"Future, we need some help," Kim Ivan told Curt bluntly. "We're running into something out here, I don't know what. Tullus Thunn can't figure it out, either."

"I never did any piloting outside the System before," angrily defended the old Saturnian pirate. "Everything is cockeyed out here beyond the Line."

"You've been out here in deep space before, Future," Kim Ivan said to Curt. "Can you figure out what's got our instruments acting crazy?"

"Suppose I do, will you turn around and go back to land us on Pluto?" Captain Future demanded.

IT WAS Joan's safety he was thinking of. There was a chance that he could bargain them into at least releasing the girl.

Before Kim Ivan could reply, Morenos answered for him. The venomous Venusian murderer thrust his head toward Curt like a striking swamp adder of his native world, as he hissed:

"No! You're not detating to anybody now, Future! You'll either help us out or we'll blast you down here and now."

"Go ahead and blast." Curt retorted. "It won't get you out of your troubles. And you'll have plenty of trouble, piloting deep space."

He was bluffing, trying to high-pressure them into agreeing to the bargain he had proposed. And Kim Ivan called his bluff.

"You're not fooling anybody, Captain Future," said the big Martian. "You won't let this ship be wrecked for lack of your help. Because if it's wrecked, the Randall girl dies - and you think plenty of her."

Curt winced. It was true. They held a trump card in the fact that Joan's safety was tied up with that of the ship.

"Let me see those instruments," Curt said.



GRAG

shortly, admitting defeat. He still had his secret plan of escape, he was thinking.

Old Tuhlus Thumm began a voluble explanation. "I never saw instruments act so crazy! They indicate a meteor-swarm or some other celestial body near us, but the readings of its position they gave are impossible!"

"That's because you're not allowing for ether-drift and relativity space-warp," Captain Future told him. "Out here in deep space, you have to correct for those factors."

His keen gray eyes swung along the deep bank of complicated dials. The red tell-tale lights under four of the meteorometers were blinking.

The readings of those meteorometers showed the presence of a body of planetoidal dimensions, several hundred thousand miles away. That was a far greater distance than the instruments could actually function. The reading was being distorted by ether-drift and space-warp and must be

corrected.

Curt Newton hastily made humble mental calculations. Trained in the routine of correction by his own former interstellar voyages, he rapidly reached a mental approximation of the true readings of the instruments.

"The body indicated by those readings is really dead ahead of us!" he exclaimed. "Shift your course three arcs to port!"

"God!" screeched Tuhlus Thumm, stiffening in the pilot-chair and staring through the broad window with dilated, bulging eyes.

For a heartbeat, they were all frozen by what they saw as they followed the old Saturnian's gaze.

They were looking into the awful face of death.

In the starry darkness full ahead of the hurtling ship, there had suddenly loomed up a spinning world. It was no more than a hundred miles in diameter. But it bulked gigantic as they raced headlong toward it.

"Don't try to brake!" yelled Curt frantically to the old Saturnian. "At this speed you'll pile us up!"

His warning went unheeded. Terror-stricken by the awful apparition ahead, Tuhlus Thumm madly jammed the brake-blast pedal to the floor.

Next moment, the *Vulcan* seemed to explode around them. The jolting shock sent the men in the crowded bridge careening into the walls.

Captain Future clutched a stanchion. He heard the scream of tortured metal coincident with the reverberations of the explosion.

He dragged himself erect. A dead silence reigned, then was broken by oaths and cries of pain from the other parts of the ship.

Kim Ivan, bleeding from a gash on his forehead, dragged himself indoubtably to his feet. "What's happened?" he asked dazedly.

"The bow rocket-tubes have back-blasted!" Curt cried. "You can't use full brake-blasts at the speed we had -- inertia forces the blast back up the tubes. I think the laterals let go, too."

"Look at that!" shouted Borabell. The Uranian's fat moon-face was a muddy yellow as he pointed shakily ahead. "We're going to crash!"

A cold hand seemed to close around Curt Newton's heart as he caught a glimpse through the broad window. The tremendous force of the disastrous brake-blast had sharply checked the *Vulcan's* headlong rush toward the planetoid ahead. But the crippled ship was still filling onward.

The uncharted little world already filled half the

starry heavens before them. The thin, feeble light from the distant Sun vaguely illumined it. Dark, dense forests were visible upon it. And at one point on its surface, a great bed of smouldering volcanoes flung a lurid red glow.

"This is your fault!" roared Kim Ivan to the terrified old Saturnian.

"I lost my head!" shrieked Tullius Thum. "I jammed the brake-blast pedal before I realized."

Captain Future jumped to the interphone. He called the eye-room. "What happened down there? Did the tail-tubes go, too?"

The scared, hoarse voice of the nutneen in charge of the eye-room answered him. "We got a dozen dead men down here-half the eyes blew up when the bow and lateral tubes back-blasted! The tail-tubes didn't give way, though they seem to be badly strained."

"Switch the power of the remaining eyes into the tail rocket-tubes!" ordered Curt. "Then get out of the eye-room!"

He turned and hailed the stunned old Saturnian out of the pilot-chair. "Give me those controls."

MOREMOS leaped forward, deadly suspicion on his face. "Wait a minute Future! You're not pulling any of your tricks!"

"Tricks, the devil!" flamed Curt. "We're falling toward that planetoid, and in ten minutes we'll crash. We can't get away, for the bow and lateral tubes are blown, and the tail-tubes are strained and can't be used for more than a few minutes of firing."

He was seating himself in the pilot-chair and grabbing the space-stick as he talked. "If we crash on that planetoid, everybody in the ship dies. I don't care a curse about you pirates. But I've got friends aboard. There's a chance I can make a safe landing."

"Go ahead and try, then!" exclaimed Kim Ivan. "Get back and give him room, the rest of you!"

The *Vulcan* was turning slowly over and over in space as it fell at appallingly increasing speed toward the mystery planetoid. Captain Future's eyes tensely estimated the distance of the little world, by the graduated scale etched in the glassate window. The hundred-mile sphere now filled most of the firmament. The edges of its dark green mass were fringed by a haze that told of a thin atmosphere.

Superhuman tension gripped the watching criminals as the ship fell on toward doom. Curt's

brown face was like rock, his hands holding the space-stick in the rigidly upright position that would fire the tail rocket-tubes when he depressed the eye-pedal.

"We're going to hit in a minute!" quavered fat Boraboll.

A wild scream came to their ears from the lower part of the ship. The mad shriek of John Rollinger.

"Are you going to let us crash without even trying?" roared Grabo to Captain Future.

The falling *Vulcan* was only miles above the surface of the uncharted planetoid. They were rushing down toward a convexity of green jungle in the center of which glowed the evil red volcanoes and lava-beds.

Air whistled outside the plunging ship, in a rising roar. It was still turning over, as it fell. Captain Future waited for one more turn.

"Do something, you fool!" yelled Boraboll in terror.

"We're falling toward those volcanoes!" shouted another of the nutneens. The non-nerved Kim Ivan silenced them. "Shut up and let him alone!"

The volcanic region of the mystery planetoid stretched only a few miles beneath the plummeting ship. The center of the infernal activity was a double row of huge black craters separated by a stupendous chasm. From the craters flowed lurid crimson estuaries of molten rock that crept sluggishly down toward vast black beds of solid-crusted lava.

Curt Newton was estimating their speed of fall by split-seconds. He knew that the tail-tubes upon which all depended would stand but a few moments of firing before their strained walls exploded. It required all the superb spaceman's nerve to wait for the *Vulcan* to turn once more. Yet he waited, till the instruments showed its tail pointed straight down.

Curt's foot instantly jammed the eye-pedal to the floor. The roar of moving power that lanced downward from the tubes flung him deep in the pilot-chair and jammed the others against the wall. The hull of the crippled ship grated and screamed from the shock of deceleration.

"We're going to land in that lava!" cried Grabo.

CAPTAIN FUTURE saw the glowing red river that flowed from two volcanoes rushing up toward them. It was straight beneath the slowing ship.

His hands flashed desperately to the bank of

individual rocket-tube throttles. He cut the tubes on the starboard side of the tail.

The off-balance thrust of the remaining tubes sent the falling *Vulcan* lurching to port. It sagged down toward the black lava beds beyond the fiery river. Instantly, Curt cut in all the tail-tubes again.

Crash! Crash! The flaring tail of the ship came to rest upon the solid crust of lava. In a flash, he cut all tubes. The ship toppled over on its side and lay still.

"Good God, what a landing!" choked old Tuhus Thum, hoarsely.

Curt Newton, his face haggard and dripping with perspiration from superhuman strain, suddenly raised his hand. "Listen!"

The momentary silence that had followed the landing of the *Vulcan* was broken by ominous cracking sounds beneath the ship. The prostrate vessel shuddered violently as the cracking sounds became louder.

"We're sinking into the lava!" yelled a mutineer's wild voice. *"The ship's weight is cracking the solid crust -- it's going to sink into the molten rock beneath!"*

With the cry came a louder cracking, and a sharp inclining of the ship. There was a screech of rending metal plates. Scorching, superheated air laden with choking sulphurous fumes flooded up through the ship.

"She's going through the crust now!" bellowed Kim Ivan. "Out of the ship, everybody!"

The mutineers scrambled madly down toward the space-door of the cyc-deck. All else was forgotten in the wild instinct to escape.

Curt Newton fought his way down the companionway with the scrambling convicts. But it was toward the mid-deck he was struggling.

He paused briefly outside its door to fling the switch of the master electro-control. Then he plunged into the cell-deck corridor. The guard in it had already fled.

"Joan! Ezra!" Curt cried chokingly through the swirling smoke. "We've got to get out of here!"

Figures were stumbling out of the unlocked cells, slipping upon the tilted floor, gasping as they breathed the scorching sulphurous air.

Curt found the staggering figure of Joan and steadied her with his arm. Ezra Gurney's grizzled face appeared through the smoke, a big frown upon his cheek and his faded eyes wild.

"Name of the Sun, what happened?" he was

crying.

The Buarr's weird form flashed like a flying cube through the swirling flames to Curt's side, lastly followed by Curt and Otho.

"Young Rih Quli was stunned by the shock -- he's lying in his cell!" cried Simon.

"I'll get him!" Captain Future yelled. "Ezra, get Joan to the space-door! Otho, see to McClinton and the crew-men!"

He plunged back to Rih Quli's cell and picked up the unconscious young Mercenian. A slumber lurch of the settling ship staggered him as he did so.

The sulphurous air was choking him. As he fought up the tilted floor toward the door, he glimpsed the dazed McClinton and other crewmen being rushed by Otho toward the exit. Grog was coolly waiting for Curt. Through the mad uproar, a shrieking of mad laughter smote their ears.

"Reifinger's back there!" Curt gasped. "Grog!"
THE great robot, who did not breathe and was not affected by the overpowering flames and heat, was already clanking back to the madman's cell. He returned quickly, clutching the insanely struggling scientist.

They tumbled down to the space-door. As they reached it, a violent downward movement of the sinking *Vulcan* threw them out.

Curt hit a surface of rough lava that was so scorchingly hot that he cried out. He staggered up with Rih Quli. Blinded by swirling smoke, scorched by almost unendurable heat, he glimpsed crevices cracking open in the solid crust around the ship. Fiery red lava gushed from beneath.

"Thus way, Chief!" boomed Grog's tremendous voice.

Captain Future struggled forward. The vague figures of his friends and of the fleeing mutineers were dimly visible in the smoke ahead.

Crack! The crust of lava shook violently under their feet. Curt turned and through the smoke he glimpsed the *Vulcan's* black hull sinking swiftly into the hissing molten rock beneath the solid crust.

He stumbled on, choking, scorched, half-blinded. Presently the air seemed a little cooler. And then it was no longer hot, jagged lava under his feet, but black soil. He had reached the edge of the lava-bed and was standing upon ground that sloped gently in the dusky light toward a distant wall of weird jungle.

Kim Ivan and the mutineers who had escaped were standing here, but they paid no attention in

this moment to Captain Future and his group. The convicts were staring strickenly out across the smoking lava-field.

Curt Newton turned and looked. Out there in the smoke, he saw the curved black hull of the *Vulcan* finally disappearing beneath the cracked crust. A pool of molten lava glowed redly where it had been.

"She's gone," muttered the big Martian pirate.

A heavy silence followed, unbroken for long minutes. The appalling enormity of the disaster was coming home to them all.

Captain Future felt an emptiness in his heart that he had never before experienced, as he realized their situation.

They were marooned here on an uncharted island of space, more than four billion miles outside the Solar System. A mere unknown speck in the void, to which no other ship would ever come.

They were utterly without tools or weapons. And, worst of all, he and his friends and the girl he loved had as fellow castaways more than a hundred of the most dangerous criminals of the nine worlds, every one of whom cherished a bitter enmity toward him.

CHAPTER VI

Mystery Planetoid



NIGHT was creeping across the little world, the dusky day deepening into complete darkness as the bright star of the distant Sun sank beneath the horizon. From the brooding black jungle in the distance, an uncanny babble of weird animal or bird calls came to the ears of the stricken castaways.

Their faces were drawn and haggard in the lurid red light from the volcanoes. From those towering black craters in the east, evil-glowing rivers of molten lava crept constantly downward like crawling snakes of fire. Showers of burning ashes shot up ever and again

from the seething craters, and there was a low, continuous growling and quivering of the ground beneath them.

Curt Newton felt a cold chill, despite the sulphurous warmth of the air. It was so terribly isolated from the universe of man, this drifting speck of land in the vast, shoreless sea of outer space. And they were so utterly unequipped to deal with whatever alien perils it might hold.

He felt Joan shiver inside the protecting cicle of his arm, and looked down anxiously at her.

"You're all right, Joan? That shock jar you when we crashed?"

"It didn't hurt me." Her face was very pale, her eyes dark and wide as she looked up at him. "I'm just scared, I guess. This weird, forbidding place -- that we'll never get away from."

"Never is a long time," Curt said quickly. "Don't worry about it now, Joan."

"Oh, Curt, you *know* we're marooned here permanently!" Her voice broke in a sob. "We've no ship, no weapons, no tools!"

Captain Future could not answer that. His arm tightened almost fiercely around her, as though in protection against what was to come. The Futuremen and their allies, like the mass of Kam Ivan's mutineers, were still staring frozenly at the lava-beds in which the ship had perished.

"Did anyone manage to salvage anything from the ship?" Curt asked them.

George McClinton, the lanky young engineer, was the only one to answer. He pointed hesitantly down at a fiber case at his feet.

"I g-g-gabbed that up as I t-t-tan out of the ship," he stammered.

"What is it? A tool-kit?" Curt Newton demanded quickly.

McClinton's spectacled face looked abashed in the red light. "N-no, it's only a c-c-case of p-prunes. I j-just happened to see it in the s-s-supply-room door as I went past."

"Blast me down!" swore old Ezra Gunney furiously. "Of all the crazy, useless things to snatch up, that's the *best*!"

A burst of laughter rose from the others at McClinton's shame-faced admission. It came from the mutineers as well as the Futuremen's party, and it was hysterically loud. It was a reaction on the part of all from their own terrifying thoughts, their realization of the appalling situation in which they stood.

It eased that frozen tension a little. Men relaxed enough from their stunned rigidity of mind and body to inspect their burns and bruises. And Kim Ivan strode out and turned to face the mutineers.

"Did any of you bring atom-guns out of the ship with you?" the big Martian pirate demanded.

Curt stiffened. He realized instantly what was in Kim Ivan's hand.

BUT none of the mutineers answered in the affirmative to the question. Grabo, the Jovian, growled the explanation of the lack of guns.

"You wouldn't let any of us wear atom-pistols in the ship," he snarled, "for fear we'd kill each other in brawls. And there wasn't any time to go digging them out of the arsenal-room when the ship crashed."

Kim Ivan's voice rose to a roar. "Don't take that sully tone with me. I'm still boss here! There may not be an atom-gun on this world, but I can beat the ears off any pair of you with my bare fists!"

None of the mutineers took up the redoubtable Martian's challenge. But Grag's big metal figure moved clunkingly forward.

"Do you think you can beat the ears off *me*?" rumbled the great robot.

Kim Ivan faced the robot with an unflinching scowl. "I know you're stronger than any four of us," he admitted belligerently to Grag. "But there's more than a hundred of us, remember that. We can pull you down, big and tough as you are."

New tension sprang into being, as the mutineer's hatred and antagonism toward the Futuremen's party came again to the fore. Curt Newton realized that it would not take much to precipitate a struggle.

"It seems to me," his cool voice cut in, "that we've had enough for one day without trying to kill each other right now."

Kim Ivan roughly agreed. "We're groggy and tired, and some of us are hurt. And there's nothing to be gained by a scrap now. We'll get some rest, and see how things stand in the morning."

The tension diminished. With little further talk, the castaways dropped to the warm ground and stretched out exhaustedly.

Curt and his friends kept at a little distance from the mutineers. He noticed that Kim Ivan himself was not sleeping, but was keeping vigilant watch from where he sat.

Captain Future pillowed Joan's head on his knee.

"Try to get some sleep, Joan."

"M-m-maybe I could g-g-get some moss or leaves from that jungle, to m-m-make a bed for her," suggested George McClinton anxiously.

"No, it's bad business to go blundering into an alien interplanetary forest by night," Curt answered.

"You never know what queer kind of creature is waiting for you."

Silence and darkness held the makeshift camp of survivors. No one felt like talking, and most were already exhaustedly sleeping. The only sounds were the medley of uneasy calls from the starlit jungle, and the low rumbling of the distant volcanoes. Now and then, the ground quivered slightly under them, with a low, muted growling.

Captain Future looked down at Joan's dark head, upon his knee. She was sleeping, her face white in the starlight. He perceived that Grag, who never slept, was standing watch nearby like an immobile metal statue.

John Rollinger was not sleeping. The crazed biophysicist was looking toward the distant jungle in an attitude of intent listening.

"Rollinger, what's the matter?" Curt asked in low tones.

The Earthman turned dazed eyes toward him. "I hear voices talking, inside my head. I'm afraid *There's somebody on this world.*"

"There's no one here," Curt soothed. "Go to sleep. You haven't anything to be afraid of."

The Brain had been brooding silently nearby. Like Grag, Simon never slept. Now he glided to Captain Future's side, and whispered.

"Lad, I've been thinking about this planetoid," he said. "There's something puzzling about it. I mean, all this volcanic and seismologic activity. There shouldn't be volcanism on a world this small."

Curt was grimly amused. "Same old Simon! All our predicament means to you is just an intriguing scientific problem."

THE BRAIN'S metallic whisper was cold and annoyed. "If my reasoning is right, this particular scientific problem has an important bearing on our present predicament. Lad, you saw the meteorometer readings on this planetoid before we crashed on it. Can you remember its approximate mass, direction and speed of drift, and distance from the System?"

Captain Future was puzzled. "I think I can, though I don't see why it's so important. The mass

of it is two-thousands-Earth, position is slightly over four billion miles from the edge of the System, and its drift is almost straight toward the System at ten miles a second velocity --"

Curt stopped suddenly, as his keen scientific mind abruptly realized the significance of the data he was quoting.

"Good Lord, Samon, I didn't see it before! This planetoid is approaching the Linnat!"

"Yes, lad," rasped the Bram. "And that accounts for its volcanic activity."

Curt Newton was appalled. The ominous fact to which the Bram had called his attention made their predicament vastly more menacing.

In fast whispers, he and Simon Wright discussed it with feverish intensity as the night hours passed. Between these two master-scientists sped whispered formulae, equations and corrections, as they sought to solve mentally a problem which was of direst import.

The sky in the 'east' began to lighten at last. A growing pallor crept across the starry heavens. And with it came a sharper, more violent tremor of the ground beneath them. The shock and the grinding roar brought the sleeping castaways into alarmed wakefulness.

"Curt, what's happening?" Joan's small hand clutched his sleeve as she awakened.

"It's only a stronger seismic tremor," he reassured her. "But it's sun-rise now, Joan."

The Sun came up as a bright, tiny disk hardly larger than a very brilliant star. It cast a feeble daylight across the alien landscape of smoking volcanoes, black lava-beds, and distant green jungles.

Kim Ivan stood, looking grimly around the unfriendly vista. The other mutineers were getting to their feet, staring about in dismal silence.

"This is a devil of a place to be marooned in," muttered Grabo, the squat Jovian.

Kim Ivan shrugged. "It's better than Interplanetary Prison, anyway. There'll be fruits and meat-animals in that jungle. We can live here indefinitely."

Captain Future grimly contradicted the big punter. "We can't live here indefinitely. This little world isn't going to *exist* indefinitely."

The big Marhan frowned at him. "What do you mean?"

"I mean that in a little more than two months, this planetoid will be shattered and destroyed,"

retorted Curt.

"Bah, what are you trying to do, scare us?" scoffed Kim Ivan, incredulously.

Morenos, eyeing Curt Newton hatefully, lapsed. "We ought to settle these cursed Futuemen right here and now. I say, let's rid ourselves of them for good. All except the girl."

Captain Future rarely lost his temper. But at the evil implication in the Venusian's last words, and at the sudden pallor that came into Joan Randall's face, Curt's bronzed face went a dull red.

His voice was low and steady, but his gray eyes were fiery as he promised the Venusian murderers.

"Morenos, when the time comes you are going to pay for that suggestion with your life."

The mutineers started threateningly forward, and Ging and Otto sprang instantly to Curt's side. But Kim Ivan intervened roughly.

"Cut your blasts!" he belloved to his glaring followers. Then, with eyes narrowed suspiciously, he snapped to Curt. "What's this story of yours about this planetoid exploding in two months?"

CAPTAIN FUTURE slowly withdrew his flaming gaze from the Venusian. He explained in short, grim sentences.

"This planetoid is becoming internally unstable. That is because it is drifting toward our Solar System. The gravitational influence of our System is setting up seismic strains inside its mass. The quakes and volcanic activity here are due to those intense strains. They'll become worse as it draws nearer the System."

"Two months from now, this planetoid will be so near the System that its tidal strains will burst it asunder. Roche's Linnat, which determines the critical distance at which a celestial body nearing a larger body will burst into fragments, operates in the case of this worldlet as though the whole System were one great body it was approaching."

Kim Ivan seemed baffled by Captain Future's scientific reference, and there was still strong skepticism on his battered red face.

He turned toward Borehall, the Uranian. "What about that, Borehall? You had a scientific education. Does Futu's claim make sense?"

The fat Uranian's moonlike yellow face twitched with fear, and his voice was husky. "It's true that Roche's Linnat will operate for the whole System as though for one body, in affecting an unstable planetoid like this. If this planetoid gets much

newer than four billion miles, it will burst."

Old Tuhlus Thum added a shrill wail. "This planetoid isn't a lot more than that from the System now, according to what our instruments read before we crashed. And it's heading toward the System, all right."

"Then Future's right," gasped Boraboll, terrified. "My God, this little world is going to burst under us in two months!"

The panic of the fat Uranian convinced the other mutineers as nothing else would have done. They looked at each other in fear.

"Name o' the Sun!" exclaimed Ezra Gorney. "I didn't think last night that we *could* be in a worse jam, but this makes it plenty worse."

Even big Kim Ivan looked a little appalled. He muttered, "That's luck for you — cast away on a planetoid that'll explode beneath us in a few weeks."

Curt Newton spoke incisively. "We've got just one chance. That is to get away from here before the catastrophe occurs."

"Get away?" echoed the big Martian blankly. "How the devil can we get away? We've got no ship now."

"Which means," retorted Captain Future, "that our only chance of life is to *build* a ship."

Kim Ivan stared. "Build a ship, when we don't have a single tool or piece of equipment? Build a spaceship, with our bare hands?"

"He's raving," growled Grabo. "A spaceship takes tons of metal plates and girders, glassite for instruments and ports, copper for cables and coils, refractory alloy for rocket-tubes, and about forty other elements for the cyclotrons, fuel and other parts. And we've just got our fingers!"

"We've got our fingers, and our *brains*," Curt corrected. "We've got the accumulated knowledge of centuries of experimenters, from the first cave-man who made a stone hammer on up to yesterday."

His eyes flashed. "Why shouldn't we be able to start from scratch? The primitive peoples of the remote past did. All the raw elements we need should be present on this world. And if we have courage and skill enough to wrench them free and build with them, we can save ourselves."

His intensity seemed to make an impression upon the others. The mutineers listened as though clutching at a precious straw of hope.

But old Tuhlus Thum shook his head. He

muttered, "Nobody has ever built anything as complicated as a spaceship from scratch, in the whole history of the System."

"It's never been done," Curt admitted, "but that doesn't say it *can't* be done."

CHAPTER VII

The Tangle-Tree



SOMETHING of Curt Newton's driving purpose seemed to communicate itself to the doubting mutineers. They might hate this red-haired planeteer, but they were nevertheless impressed by him.

It was at such moments that Captain Future's genius for leadership asserted itself. The Brain was more deeply versed in scientific lore than he. Grag was stronger than he was, and Otho swifter. But he was leader of the Futuemen because of his indomitable will and courage.

"If anybody could build a ship out of nothing, which I still doubt, you Futuemen maybe could," muttered Kim Ivan.

"It's worth trying!" Boraboll exclaimed nervously. "Anything's better than just sitting here waiting to die."

A general murmur of agreement came from the mutineers. Appalled as they were by the vista of approaching doom, they gasped at any straw.

"There's just one thing," Curt said incisively. "If we Futuemen are to try building a ship, we must have absolute freedom of action and must have authority to command the assistance of all of you."

Morenos flared at that. "Me take orders from you, Future? Not in a million years!"

"By God, you'll take orders from *me*!" roared Kim Ivan to the green-faced Venusian. "And I'm agreeing to Future's conditions. We can't reasonably expect him to achieve this feat without the help of us all."

"It's all a lot of nonsense," shrieked old Tuhlus

Them skeptically. "Nobody can build a spaceship out of nothing. It just can't be done."

"Suppose we do manage to build a ship and get away? What then?" Grabo demanded suspiciously.

Curt was ready for that. "Then you'll agree to set myself and my friends down on some uninhabited world of the System."

He knew better than to demand more. If he could once assure Joan's safety, the pursuit of the antineers could be taken up later.

"I agree to that, Future," said Kim Ivan promptly. "Now how do we start?"

For a moment, even Captain Future was daunted by that question. It made him realize to the full the appalling magnitude of the thing they were about to attempt.

How did you start building a big, complicated space ship when you had literally nothing but your bare hands? He groaned mentally as he envisioned the complexity of thousands of massive and delicate parts which must be correctly fabricated and assembled to form a navigable vessel.

It wouldn't do to show doubt. He quickly looked around the hostile, alien vista of the mystery planetoid.

"Our first step necessarily must be to establish safe living-quarters for ourselves and investigate for food," he declared. "Then we'll make preliminary survey for sources of the raw materials we'll need."

Kim Ivan assented to that with a nod. "I'm hungry already, and getting more so by the minute."

George McClinton had opened his fiber case of prunes. The lanky, spectacled engineer stopped munching the dried fruit to inquire.

"Anybody w-w-want some prunes? They're very n-n-nourishing."

"Not until I'm hungrier than I am now, will I eat those damned things," growled Ezra Gurney. "When you was satchel' up somethin', why didn't you satchel up a case of beef or somethin' like that?"

Captain Future and Kim Ivan, after a brief colloquy, had decided that they must find a suitable spot for a base nearer to the jungle. From the jungle must come whatever food they could glean. And the sulphurous air that clung over these lava-beds made proximity to them unpleasant.

THE whole party started toward the jungle. Its green wall was less than a half-mile away. They could see birds or winged creatures

flitting above the roof of the forest, and deduced the presence of a varied animal life from the calls and noises they had heard during the night.

Joan asked Curt an earnest question as they tramped forward. "Curt, is it really possible to build a ship? I know you could do it if anybody could, but can anybody do that?"

"Joan, I don't know," he admitted. "But our lives hang on the answer, and it's up to us to find out."

"If we had unlimited time and materials, it might be done," remarked the Brun pessimistically. "But to do it in two months, with no tools to begin with and criminals for workmen--"

Grag's deep voice shouted from behind them, interrupting. "Hey, Chief, this crazy Rollinger won't come along."

The crazed scientist, whom Curt had deplored Grag to keep an eye on, was refusing to accompany the party toward the jungle. Rollinger's haggard face was distorted by overpowering fear, and his eyes were wild as he babbled objection.

"I won't go there!" he cried, peering terrifiedly toward the distant jungle. "They are there -- the mighty ones. I heard Them speaking last night, in my mind. They know we are here, and They don't like it."

"Who's he talking about?" Grag asked puzzledly, as Curt and Otto and Joan came back.

"He's just raving again," Otto commented.

Rollinger's voice rose to a shrill pitch. "They warned last night that we must not stay here, that They will kill us if we do!"

"Pick him up and bring him along, Grag," ordered Curt. "We can't delay now to soothe him."

Rollinger struggled frantically, but was like a child in the grip of the great robot.

"Do you suppose there really could be intelligent, malign life on this world?" Joan asked Curt.

"I doubt it. We've seen no signs of intelligent life here so far," Captain Future replied. "Of course, we're likely to find some very queer plant and animal life here. For this planetoid doesn't belong to our own System. It's a wanderer of the interstellar void, a tiny planet that must long ago have been torn away somehow from its parent sun."

He continued thoughtfully. "Perhaps it has drifted through space for ages. Undoubtedly it has a radioactive core that has furnished sufficient warmth to support life on its surface. Evolution might take some weird paths upon a little, isolated

wouldlet like this "

The green wall of the jungle loomed before them in the feeble daylight.

The castaways halted and stood silently looking at the alien, grotesque forest.

It was composed chiefly of towering tree-ferns, whose colossal fronds were interlaced by lianas and vines. Thorny underbrush decked with brilliant semlet and yellow flowers, and big pale-green mosses choked much of the space between the trunks of the mighty ferns.

"There's some kind of a natural clearing in there," Kim Ivan reported to Curt. "Want to go in and look it over?"

Captain Future nodded, and he and the big Marhan pushed their way beneath the shadow of the towering ferns. The air was hot and steamy inside the jungle, and many transparent-winged insects flashed about them.

"Makes you think of the Jovian forests, and yet everything is different," Kim Ivan said soberly. "Ah, here we are."

They emerged into the natural clearing that lay a little within the jungle. It was actually a low knoll, a few yards high and several hundred yards in diameter.

NOTHING grew within this clearing except a few dozen gigantic cacti. They were dark, barrel-shaped growths twelve feet high, spineless and with fluted sides.

"Lucky, finding a natural clearing like this," Kim Ivan remarked. "It's just what we're looking for, isn't it?"

Curt nodded. "We can build a stockade of fern-trunks around it for protection against possible beasts of prey. And it looks as though we could dig a spring at that moist patch of ground."

He turned to go back and bring the others, but Kim Ivan delayed him with a hand on his arm. The big Marhan pointed had an oddly earnest expression on his massive, battered red face.

"Future, wait a minute. I got something to tell you."

Curt looked at him keenly. "What is it?"

Kim Ivan scratched his ear. "Well, it's like this. I know you got it in for me because I led the mutiny. Not that I'm excusing that -- I still say anything's better than Interplanetary Prison. Though if the boys had obeyed my orders, there wouldn't have been any killing."



THE BRAIN

Curt Newton wondered what this rambling introduction was leading toward. "So what?"

"Well, I gave you my word we'd work with you all the way, trying to build this ship, and I'm a chap who keeps his word," Kim Ivan went on. "But I can't always control the boys. So -- watch out for Morenos!"

Captain Future stiffened. "Is that Venusian already planning to make trouble?"

"He hates you like poison," Kim Ivan said. "He was saying a little bit ago that he'd figured out how to get you and your pals, when the time came. And I'm afraid some of the boys would side with him. I'd keep an eye open for death-traps, if I was you."

Curt said thoughtfully, "I doubt if he'd try anything right away, for building this space ship is his only hope's well as ours. But I'll watch out for his clever little traps. And thanks for the warning, Kim."

"Don't thank me," disclaimed the big pirate bluffly. "I'm not worried about you for any reason except that you're our only chance of getting off this cursed little world. I know that we can't build a space ship out of nothing, but maybe you can."

They went back and brought the rest of the castaways to the clearing which they had selected for an encampment. Then Captain Future issued orders which were backed up by Kim Ivan's authority over the mutineers.

"The first essential is to build a stockade for protection and to find food," he declared. "Then we can build huts for living-quarters, and start work assembling materials and tools for the ship."

He formed them into work and foraging parties. The former were to bring saplings and vines with which to build a rough wall around the clearing. The foraging groups were to look for fruits, nuts or other possible edibles, and bring them back to the Brain for inspection.

"Ezra, you stay here with Joan," Curt told the old marshal. "How are you, Rih Qulh?"

"The injured young Mercanian lieutenant gingerly touched his bandaged head. "It still aches a little, but I'm fit for work now."

"Better take it easy," Curt advised. "And, Ezra, keep an eye on Rollinger all the time."

JOHAN ROLLINGER had exhibited an almost pitiful tenor of the jungle, and had had to be dragged by Gag to this clearing. The crazed Earthman now crouched, looking about the place with wild, scared eyes.

Curt, Gag, Otho and George McClinton formed one of the work parties. They plunged into the shadowy green jungle of giant tree-ferns and choking underbrush, in search of suitable material for the stockade.

"If we had just a b-b-bush-knife, it would be a lot easier," mumbled the lanky McClinton, who was munching dried pines as he marched.

"Why not wish for an atomic blaster, while you're at it?" suggested Otho. "Besides, this is where Gag comes in handy. He can tear up trees by the roots. You never saw anybody so strong."

"Meaning that you're trying to flatter me into doing all the work," growled Gag. "Well, it won't go, my slippery rubbered friend."

They were already deep in the green jungle. Big tree-ferns reared their glossy trunks for fifty to sixty feet, bearing masses of flat fronds and spore-pods. Yet these were not true pteridophytes at all, but the result of a wholly different line of plant evolution, which appeared not to rely on photosynthesis as a source of life.

There were other and even stranger trees. Huge ones like banyans reached out many leafless limbs from a massive central trunk. Others looked like big horse-tails. Club mosses flourished in the spaces between the crowding trunks, and creeping vines were everywhere. Many of the vines and the

thorny smaller shrubs bore unfamiliar fruits.

Insect life was abundant. But most of the winged arthropods possessed perfectly transparent wings and were hard to see. There were no true feathered birds, but white, bat-winged creatures were numerous and noisy in the tree-tops. And Curt Newton found tracks and other traces of animals that were apparently several species of small rodents.

"There doesn't seem to be any sign of large animals," Captain Future declared. "Though all the life here is so alien it's hard to tell."

George McClinton's spectacled face was discouraged as he looked about the green gloom of the jungle.

"It's certainly w-w-wild enough," Gag was already at work, uprooting saplings and ripping off big branches from the tree-ferns to be stripped into stockade-poles. The other three pitched in, but the huge robot had the advantage here. His steel arms could break tough limbs that the others could not tackle.

Leaving a trail of trimmed poles behind him, Gag advanced toward one of the big banyan-like trees. He seized one of its leafless, drooping branches instantly, the branch retaliated by seizing him. It and others of the scores of branches coiled around him like tough plant-tentacles and dragged him toward the central trunk.

"Hey, Chief, this tree's fighting back!" yelled Gag alarmedly.

"It's some kind of carnivorous form of plant-life that can devour animals!" Captain Future cried. "Tear those branches away, Gag."

"I can't!" shouted the robot. "The cursed things are strong as steel! It's a regular tangle-tree."

CHAPTER VIII

The Cubics



AT least twenty of the tentacle-like limbs had now coiled around Gag. They were lifting his massive figure toward the central trunk. This was a cylindrical mass of fiber twelve feet in diameter. The tangle of branches grew from its sides, and its top was a huge, hollow calyx.

Curt and the other two sprang forward to aid the robot. But they were themselves gripped by other branches. As they sought to free themselves, Grag's struggling form was being hoisted up into the air and held above the hollow calyx of the tangle-tree.

From inside the huge calyx spurted up streams of sticky green liquid that smeared the helpless robot from head to foot. Grag yelled with fury at this, but the sticky juices continued to spurt over him.

"The thing is covering Grag with its digestive juices before it eats him!" exclaimed Curt. "Try to reach him."

But they couldn't reach him. Each of them had a coiling branch around him. Only the fact that most of the tangle-tree's branches were occupied with Grag made it possible for them to avoid being drawn in also.

Grag, bellowing in rage and completely covered by sticky plant-juice, was now being drawn remorselessly down into the hollow calyx of the trunk. He disappeared inside it, though his muffled roaring still sounded.

"Good Lord, he's g-g-gone!" stammered McClinton. "The thing has d-d-devoured him."

But after a few moments, during which they fought to free themselves, Grag was suddenly drawn up again from the calyx of the tree.

The robot was held as before, while the sticky digestive juices of the carnivorous tree spurted again over his raging figure.

Otho uttered a muffled shout as he tore himself free from the branch holding him. "The tree couldn't digest Grag's non carcass that time, so it's going to try again."

In fact, Grag was now being drawn back down into the calyx of the massive trunk. Again came his muffled bellowing. Curt and McClinton had by now managed to release themselves also.

But there was no need for the three to spring forward to Grag's aid. For now the robot was being hoisted up again out of the calyx. And with an almost human gesture of disappointment and disgust, the tangle-tree's gripping branches hauled the robot away. He flew through the air and hit upon the soft ground some distance away, with a resounding thud.

Otho collapsed in a fit of laughter when they reached Grag's side. "The thing couldn't digest Grag, now! I'll never forget how he looked squirming up there with the tangle-tree hopefully

squirting sap over him!"

"Laugh, you misbegotten son of a test-tube!" roared Grag furiously.

The big robot was a ludicrous figure, smeared from head to foot with thick green plant-juice.

Curt, too, was shaking with mirth. "It's lucky the tree did happen to grab you instead of one of us," he consoled the angry robot. "Any one of us would have found it no joke."

Grag ruefully tried to clean himself off. "Of an the screwy forms of life that I ever --"

Captain Future suddenly interrupted, holding up his hand sharply. "Listen! I heard a cry!"

A distant yell came to them through the green gloom of the weird forest.

"One of the other parties has run into trouble!" Curt exclaimed. "Come on!"

They plunged through the jungle in the direction from which the cry had come. Now they could hear a chorus of alarmed voices.

It was one of the work-parties headed by Grabo, the Jovian, that was doing the shouting. The squat Jovian pirate turned as Curt and his companions appeared.

"Look at those things!" he exclaimed. "We don't know what to make of 'em!"

CURT NEWTON stared. He too, in all his extensive experience with the strange life of far worlds, had seen no creatures such as these.

There were six of the creatures, and they were busily working in a little open glade of the forest. Each of the things looked like a giant centipede, with an oddly geometrical body eight feet long and many square legs set along it. They were carrying slabs of stone along.

A closer look revealed the amazing details of their appearance. Each of these big creatures appeared to be composed of scores of small, living, fleshy pink cubes. Each cube was four inches square, and had two twinkling, bright little eyes and a small mouth-opening.

"Why, I never saw anything like these before," Captain Future muttered, stepping forward.

"You haven't seen the half of it yet!" exclaimed Grabo. "They can split themselves up when we start toward 'em. Look at 'em! They're doing it again!"

The weird, geometrical creatures had until now ignored Curt Newton and the others, diligently resuming their work of carrying away the stone slabs.

But now, as Captain Future approached, the centipede creatures suddenly dropped the slabs and then underwent an incredible transformation.

Then big, geometrical bodies *disintegrated*. They broke up into the scores of living cubes of which they were composed. Each cube was revealed to be a separate, living creature. Each had eight tiny claws or legs, one at each corner of its cubical body, as well as its own eyes and mouth and ears.

These hundreds of cube-creatures scurried swiftly together, and joined into a single big figure. The living cubes joined tightly, each to the next, by instantly hooking their tiny claws together.

Silently and quickly as though by magic, the cubical creatures had combined to form a towering, semi-human figure ten feet high. It advanced on square, stocky legs with its massive arms raised menacingly toward the Futuemen.

"Get back!" Curt Newton cried warning. "The creatures think we're hostile."

They hastily recoiled. Grabo and the nutmeers already had fallen back, and George McClinton was gaping incredulously.

The geometrical monster halted its advance. As though satisfied they had nothing more to fear, the cube-creatures that composed it broke up into separate units. Quickly, they recombined into the six centipede-figures. Then, carrying the stone slabs, they calmly disappeared into the jungle.

"Did I dream that or have I been drinking radium highballs?" gasped Otto. "What the devil are those freakish little cubes?"

"That's a good name for them -- the Cubics," Captain Future commented. "As to their nature, it seems pretty obvious that they're small animals who have developed to a great degree the faculty of living in a cooperative community. Just like a hive of bees or a colony of beavers, only more so."

"But how can the little devils go through those quick formations of them without any hesitation or discussion?" marvelled Grabo.

Curt thought he could guess. "They must be constantly in telepathic rapport with each other. Something like the 'hive mind' of the bees, even further developed. Maybe the individual intelligence of each Cubic pools into a group-intelligence, just as their bodies combine. They're at least semi-intelligent, judging from the way they were working."

THE discovery of the Cubics made all of them more cautious in the hours of work that followed. It was increasingly evident that their former surmise was correct, and that evolution in plant and animal life had indeed followed strange paths upon this age-long isolated planetoid.

What other uncanny forms of life might haunt the dense fern-jungles, they wondered? And what if the Cubics themselves should prove definitely hostile? They could be, Curt Newton realized, formidable enemies. And the tangle-trees, which seemed numerous, were a constant danger.

By sunset of that day, they had gathered in the clearing a mass of strong poles sufficient to build a stockade. The foraging parties had also brought back a mass of fruits, berries and nuts. These were of every shape and color, and most of them were utterly unfamiliar in appearance.

The Brain, whose knowledge of planetary botany was encyclopedic, had inspected the fruits and had ruled out a few which he considered likely to be poisonous. The castaways ate hungrily of the others, finding a big, spherical, meaty nut the most nourishing.

"We'll need meat, too," Captain Future declared. "There are small animals in the jungle. Any of you know anything about trapping?"

Grabo, the squat green Jovian, nodded. "I used to trap 'diggers' in the jungle north of Jovopolis, when I was a kid on Jupiter. All I needed was a cord to make into a snare for their runways."

"Take a couple of men and get some snares set tomorrow," Curt suggested. "You can make the cords from strips of clothing."

George McClinton distastefully put down a very npe, squashy yellow fruit of egg shape which he had been eating.

"Too m-m-messy," he said. "And it doesn't have the f-f-flavor of a p-p-prune."

The tiny disk of the Sun was sinking again toward the horizon. The shadows of the grotesque, towering cacti in the center of the clearing grew longer.

Night was falling. The stars were already picking forth in the dusking sky, and the heavens eastward showed a quivering red glare from the volcanoes and lava-beds there.

"I think," Curt decided, "that we'd better keep a fire going nights until we have our stockade up. We've already learned that there are formidable forms of life on this worldlet."

A fire of dry fern-logs soon blazed up near the center of the clearing. Curt had kindled it by striking sparks from his steelite belt-buckle against a hard stone. The castaways gathered around it as though taking comfort from it as the night deepened.

Captain Future musingly looked around the circle of many firelit faces. What an oddly assorted company they were, he thought. Joan's lovely face, and McClinton's spectacled, senous countenance. Otho loling indolently with slant eyes watching the blaze, and young Rih Quli's bandaged head. Kim Ivan's massive, jovial red face, and Grabo and old Tuhlus Thum and Fat Boraboll, and Morenos' sullen features and secretive eyes. And the Brain posed outside the circle a little, while big Grog stood in the shadows keeping watch upon the raving John Rollinger.

"We've got a fire and some food," Kim Ivan was saying, "and tomorrow we'll put up a stockade and some huts. Then what?"

"Yes, what then?" Morenos asked Captain Future with an open snarl. "Just how do we start building a space ship with our bare hands?"

Curt answered tersely. "Our first need will be tools — durable metal tools. Let's see how much metal we have among us."

The result of the inventory of their possessions was discouraging. They had a few metal tinkets and buckles. One of McClinton's engineers had a small chromaloy wrench.

OF course, they all had their gravity-belts. Every interplanetary traveler constantly wore his belt, whose compact gravitation-equalizer made his weight the same on any world. But they couldn't sacrifice their belts, without suffering dangerous effects from the low gravitation of the little planetoid.

"I also got a big package of chewin' gum, if that's any good," snickered old Tuhlus Thum.

"And I have this c-c-case of p-prunes," stuttered McClinton.

"There isn't enough metal here to do us any good," Curt Newton declared. "We'll have to make our own steelite tools, from scratch."

"Say, what about Grog?" Otho asked. "There's a ton of metal in his carcass. If we melted him down..."

"I heard that!" bellowed Grog from out in the shadows where he was watching Rollinger.

Kim Ivan asked gloomily, "How're we going to get steelite for tools?"

Captain Future shrugged. "We'll have to locate iron deposits, and smelt the metal out, and make our own alloys. It won't be easy, but it's the first essential step toward building a ship."

"And then what will be the next?" Boraboll squeaked skeptically.

"Then we'll try building an atomic smelter for large-scale operations," Curt answered. "Some of us can be reconnoitering this worldlet in the meantime for the raw materials we're going to need. Chromium, beryllium, manganese, copper, calcium, and about forty or fifty others."

They all seemed dashed by the magnitude of the task proposed. To many of them, the difficulties looked insuperable.

"How do we know we'll find any of those elements here?" Ezra objected. "Those are elements of our own Solar System, but this planetoid ain't a part of our System. It's from way off in the Galaxy, you said."

The Brain woke from his brooding reverie to answer that. "The matter of the whole Galaxy is largely homogenous in nature, for all its stars had a common cosmic origin. The remotest suns show the spectra of much the same elements as our own Sun. We should find most of the needed elements here, though on this small body a few of them may not be present."

"Is this planetoid really a wanderer from some distant star-system?" Joan asked Curt with eager interest.

He nodded. "It must be. Probably it was torn away from its parent-star by some gravitational disturbance, and has been drifting through the void ever since."

"A little star, falling alone through space for ages," Joan murmured. "Let us call it by that name — Astarfall!"

The fire died down, and they split into separate groups to prepare for sleep. George McClinton had prepared a mattress of soft fern-fronds for Joan, which the lanky engineer shyly showed her.

"It's not m-m-much, but it's b-better than the ground," he stuttered, and retreated awkwardly from her thanks.

She looked at Captain Future with pretended indignation. "Why didn't you think of that?"

Curt grinned. "I don't believe in pampering my women."

"You women!" she echoed scornfully. "There's no other gal beside myself who'd waste time on a crazy, foot-loose planeteer like you."

He chuckled as he turned away. The others were already stretched out, asleep. The fire had died to glowing embers, but the red glare of the smoking volcanoes eastward cast weird, flickering shadows in the camp.

Curt went to where Gag was standing guard beside John Rollinger. He had bound the crazed scientist's feet to prevent him from fleeing. For Rollinger was still muttering and babbling in unbroken terror.

"I hear," Rollinger was muttering, his mad, brilliant eyes staring into nothingness. "I hear, but I cannot obey—"

Gag asked uneasily, "What do you suppose he's raving about? He gets on my nerves."

"He's just delirious," Curt said. "It's a pity—a fine mind like that, irrevocably wrecked."

Captain Future stretched out tiredly on the ground nearby. The night air was growing chill, and he wrapped his zippen-jacket more tightly around him.

As he dropped off to sleep, the low, babbling mutter of the crazed Earthman scientist was the last sound in his ears.

CHAPTER IX

The Work Begins



CURT awakened suddenly. It was still dark, and everything was drenched with a cold dew. But by the shifting of the starry sky, he perceived that he had slept for several hours.

He soon discovered what had awakened him. Rollinger's ravings had become louder and shriller, were ascending to a frenzied pitch. Curt quickly rose and went over to the spot where Gag was standing watch over the madman.

"No, don't make me!" Rollinger was gasping

"I can't do it—I can't!"

The man's face was frantic in the starlight, and his body was writhing and shuddering.

"Chief, he's been getting worse by the minute!" Gag reported. "He keeps talking to somebody he calls the Dwellers."

Curt knelt by the bound madman, and spoke earnestly in an effort to reach that dimmed, distorted mind.

"Rollinger, what are you afraid of?"

The man's wild eyes looked up at him, as though dimly recognizing him.

"The Dwellers!" gasped the madman. "The hidden lords of this world, whose powers are strange and mighty! They have been speaking to me in my mind, have been commanding me to do that which I cannot do."

Captain Future frowned. There was something uncanny about the raw, shuddering tenor of the crazed scientist.

"Chief, do you suppose there could be malign creatures on this world that he can sense but we can't?" Gag asked in a low voice. "There's scientific proof that an unclung mind is more sensitive to outside telepathic influences than a sound mind," muttered Gag.

Curt felt definitely uneasy. He straightened and looked around the starlit, sleeping camp.

"There don't seem to be any intruders here. You didn't see anything strange, did you?"

Gag shook his head. "No, nothing at all. And everyone else has been sleeping, except for that Neptunian mineeer, Luuq. I saw moving around a little bit ago."

"Maybe Luuq saw something," Captain Future murmured. "I'll see if he did."

He went through the camp, searching the sleepers for Luuq. To his surprise, he could not find the Neptunian anywhere in the camp. The ex-bandit had disappeared.

Kim Ivan awoke with catlike alertness as Curt renewed his search for the missing man. The big Martian instantly got to his feet.

"What's the matter? Something wrong?" he demanded.

"I'm afraid so," answered Captain Future. "You friend Luuq is missing. Gag saw him moving about, but now he's gone."

Others were awakening, aroused by the Martian's loud voice. They looked at each other uneasily.

"See if anyone else is nussing," ordered Kim Ivan, frowning.

They soon discovered that one other of the mutineers had also disappeared, a little Mercurian ex-thief.

"Maybe the two of them just went out into the jungle and will come back," suggested Bomaboll, the fat Umanan, hopefully.

"They wouldn't go prowling around in that jungle by night," Kim Ivan said emphatically. "If they left the camp, it was because they were dragged out of it."

"Future seems to know more about it than anyone else," said Moremos unsympathingly.

The gathered mutineers understood the Venusian's veiled accusation. They turned hard eyes upon Curt Newton.

"I know no more than you do," Curt said quietly.

"Future couldn't have made away with Luuq and the other," Kim Ivan said loudly. "Not without some sound that would've roused us all."

"I don't know," muttered old Tuhlas Thum.

JOHAN ROLLINGER interrupted. The crazed scientist, still lying bound under Greg's guard nearby, was sobbing hysterically.

"We must leave this world!" he screamed. "Unless we leave, the Dwellers will kill us all!"

"What's he talking about -- the Dwellers?" Kim Ivan asked puzzledly.

"The hidden ones -- the mighty lords -- they watch us now and they wait!" raved Rollinger.

Grabo, the Jovian, stirred uneasily, his dark face nervous in expression. "I don't like this place. It's as spooky as the Place of the Dead, on Jupiter."

"Do you s'pose there could be critters of some kind on this planetoid cunning enough to steal into the camp and carry away them two men?" asked Ezra Gurney.

Surely we'd have seen any creatures as intelligent as that," objected Joan, eyes bright with concentration.

"I don't know," Curt muttered. "Everything about this planetoid is alien, different from the life of our own System. It comes from remote regions of the galaxy, and during its ages of isolation, its evolution has taken different paths."

There was an uneasy silence. The night suddenly seemed pregnant with mysterious menace. The low calls of small animals and the squeak of birds from

the dark surrounding jungle fell upon tensely listening ears.

Had some formidable beast of prey actually entered the camp and slain the Neptunian and Mercurian, it would not have been so terrifying as this baffling disappearance of the two men. It was the unearthly mystery of it that chilled them. Then minds conjured pictures of malign and alien creatures lurking out there in the dark, watching and waiting.

"The most interesting-looking creatures we've seen on this planetoid are the Cubes," drawled Ezra. "Do you s'pose they're the Dwellers?"

"They didn't look of high intelligence," Curt said doubtfully. "Besides, how could they enter the camp and make off silently with two men?"

"Luuq and the Mercurian must have went sleepwalking into the jungle and got grabbed by some beast," Kim Ivan growled.

"Just the same, I propose we post our own guards at night to prevent any more 'sleepwalking'," said Moremos, glancing toward Curt Newton.

For the remaining few hours of that night they sat around the fire, talking in low voices. All realized more completely than ever before the alien nature of this wandering worldlet from outer space. What dark riddle was it hiding?

The coming of day was a relief to strained nerves. Almost cheerfully, they breakfasted on fruit and berries. Then Captain Future got to his feet and incisively addressed them.

"We've got to organize our operations, if we're to get anywhere with the task ahead of us," he declared.

He was a confidence-inspiring figure as he stood, his tall, rangy figure and red head silhouetted against the pale sunrise, his keen gray eyes sweeping their faces. But he was not nearly so confident as he looked. He was a little overwhelmed by the audacity of what they were about to attempt.

"First, we've got to complete the stockade around this knoll and build some huts," he stated. "Others of us have to form regular foraging parties to supply fruit, roots, and small meat-animals if possible."

KIM IVAN spoke up. "I'll superintend the building of the stockade and huts. And Grabo can take care of the food-supply. He says he knows how to set traps for the animals whose traces

we saw in the jungle."

Curt nodded. "I'll leave all that to you, then," he told Kim Ivan. "The Futuremen and I will begin an exploratory survey for the metallic ores and other materials we'll require. That's our first step toward a ship."

The big clear knoll soon was buzzing with activity. Kim Ivan's stentorian voice bellowed orders, supervising a large party of the mounteers in hauling fern-poles from the jungle and setting them up in a stockade and in framework for huts.

Grabo had chosen a dozen of the men and had gone into the fern-forest to set the animal-snare he had improvised from strips of clothing. Other of the men were already bringing in fruits and roots.

Curt asked Ezra Gunney, "Will you stay here and keep an eye on Morenos? I don't think he'll try to make any real trouble until we have built a ship. But I don't want to take any chances."

"I understand," nodded the veteran marshal. "I'll watch that varmint."

Captain Future and Grag and Otho and the Brain set forth eastward upon their quest for ores, accompanied by George McClinton and Joan. The girl had insisted upon going.

Curt headed toward the nearby region of volcanic activity. All around that region were chasms and crevasses that had been split by the recent seismic disturbances.

"Our best chance of finding surface deposits of iron, beryllium and the other ores we need, is in those chasms," he pointed out. "We have to find the stuff in easily worked surface deposits at first, for as yet we have no tools for mining."

"When I think of all the work ahead of us, I wish I was back home on the Moon," Otho said gloomily.

They approached the black fields of solidified lava. Beyond that crusted expanse lay the smoking valleys through which came the sluggish red rivers of molten rock that flowed down from the towering volcanoes. The sulphurous fumes half-veiled the forbidding vista.

Curt Newton turned to the Brain. "Simon, will you reconnoiter as many of the chasms and gorges as you can? See what deposits of ores you can spot. We'll be working northward, from here."

The Brain glided off upon his mission, looking like a glittering flying cube as he shot away through the pale sunlight upon his traction-beams. He was quickly out of sight.

George McClinton, to whom Simon was not as familiar as to the others, looked after the Brain with marveling wonder.

"If the Brain can F-fly like that so easily, w-w-why couldn't he F-fly back to the System for help?" he asked.

Curt shook his head. "Simon derives the power for his beams from a tiny atomic generator inside his case. It holds a charge of fuel sufficient for many hours' activity, but not enough for a long flight in space."

"That reminds me," Grag said dismally. "I'll be needing copper and other elements for fuel for my own generators pretty soon. Otherwise, my power will run down."

Otho told the robot, "That's all right -- when your power runs out, we can make some swell tools out of you. Yes, sir, you're going to come in mighty handy, Grag."

"Chief, will you make Otho quit threatening me!" demanded Grag angrily. "He's getting on my nerves by his talk of using me for metal."

"He can use up some of his wind climbing down into this crevice and prospecting for iron," Captain Future said acidly as they started forward.

They had been moving northward and had come to a deep crevasse driven in the rock of the planetoid by quakes. It was quite narrow and its jagged walls were almost vertical.

OTHOS rubbery figure went down the walls as though he were a fly. Presently his voice echoed hollowly up to them.

"Yes, there's nickel-iron down here. Looks like the core of Astarfall."

"That's what I was hoping for," Curt declared. "I figured from its mass that Astarfall would have a nickel-iron core like most planetoids and planets, and that its rock crust could not be a thick one."

They went back to the jungle and secured a quantity of tough vines from which they fashioned a strong, flexible ladder. Curt and Grag went down this into the gloomy depths of the crevasse.

Glittering outcrops of nickel-iron ores were plentiful in the bottom of the chasm. But digging out the ore without tools was another matter. Here Grag's great strength came into play. With a few chunks of hard rock for hammers, the big robot loosened small masses of ore.

Joan and McClinton had woven wicker baskets which they let down by a vine rope. Thus the

masses of ore were hauled to the surface. It was slow, toilsome work. The day was waning when they finally had enough of the ore for Captain Future's immediate purposes.

The Bruin had returned and made his report. "I investigated a good many of the chasms. And I found indications of copper, manganese, chromium and several other of the ores we need."

He listed them all, and Curt Newton listened intently. He asked then, "What about the beryllium, cadmium and lead? They're vital."

"I've not found any of them yet," admitted the Bruin. "There are signs of possible beryllium and lead deposits in that huge gorge between the double range of volcanoes. But I didn't risk going far down into it, for, that abyss is highly dangerous. The terrific air-currents, heat and fumes from the lava at its bottom make it a veritable canyon of chaos."

"The Canyon of Chaos sounds like a good name for that place, at that," remarked Otho.

"It's hardly worth while naming places on a world that's going to blow up two months from now," grumbled Grog.

The Sun was sinking when they returned to the camp. The transformation there proved that Kim Ivan and his men had been at work.

The stockade around the knoll was roughly complete. A spring had been dug. The framework of a dozen huts was up, and several had already been thatched with flat florets. The huge, barrel-shaped caets in the clearing had been left untouched, since to attempt to cut down those giant growths would have entailed immense labor for no particular reason.

"Not bad," Kim Ivan admitted when Curt complimented him on the day's work. "It won't take us long to finish up the huts now."

GRABO and his trappers soon returned from the jungle. "We eat tonight, and not just fruit," proclaimed the Jovian complacently.

They had snared four plump, rodent-like animals as big as small pigs. And they had brought several new varieties of edible fruits.

"But that jungle is a devilish place," swore the Jovian. "Beside those cursed tangle-trees, there's smaller plants that eat insects and birds in the same way I never saw such evil plant-life as this world has."

Nevertheless, the animals made a palatable sort of stew. Although he didn't eat the Bruin passed

upon the flesh as being harmless and containing nutriment. He waved his eye-stalks questioningly when Captain Future thoughtfully fished a couple of bones out of the stew and offered them for his inspection.

"What is it, lad?" he asked.

"Note the glazed appearance of these bones," said Curt. "Just an interesting side problem, but do you make the same thing I do of the skeletal structure of mammals here?"

"Siliceiferous compounds!" exclaimed the Bruin at once. "The bony structure of creatures on Astarfall are built up from silicon. Altogether different from Earthly specimens. It's unmistakable."

"Exactly," said Captain Future, nodding. He turned to speak to one of the cooks.

"Save the skins of those animals for me," he requested. "I'll need them tomorrow."

"To build the space ship?" sneered Moremos, who had returned with the Jovian.

"Yes, to build the ship," Curt nodded, with a calm smile.

He and Grog scraped and cleaned the hides that night, and he used strong fiber threads and a thorn needle to sew two of them together into a rude but effective bellows. This he mounted in a rough wooden frame.

It was late when he finished this work by the flashlight. Joan had retired to the smallest hut, which had been assigned for her use. Most of themithneers and others were also already asleep.

Grog had taken up his tireless and sleepless watch. And old Tullus Thinn and Boraboll were remaining awake and watchful tonight, too.

"I'm going to turn in," Curt yawned, straightening. "How's Rollinger?"

"Muttering a little, but not as nosy as he was last night," Grog replied. "I think he's quieting down."

The crazed scientist was now confined in one of the other small huts. He had been subdued and silent all during the day.

CHAPTER X

Dread Warning

CURT slept heavily. When he awakened and



went out into the sunnse,
he found Kim Ivan
sweating

"There is something
cursed spooky about this
place," declared the big
Murtian "I had queer
dreams all night - as
though somebody was
talking inside my mind"

Boraboll spoke
nervously "Nothing
happened all night And
nothing came near the camp that we could see or
hear."

That day, while most of the mutineers resumed
the work of building the huts and replenishing the
food-supply, Captain Future and his party began the
next step of their task.

"We've got iron ore, and now we've got to smelt
it out for steel," Curt stated. "Since we don't have
any atomic smelter, we'll have to go back to ancient
ways."

He supervised the bringing of massive stones,
and the building of them into a small furnace. They
had no coal with which to fire this, but the Brain
had located a deposit of combustible peat in one of
the swampy sections of the jungle.

Curt Newton attached his rick bellows to the
stone furnace. He used its draft to fan the peat fire
he kindled inside. Then he arranged a mass of the
nickel-iron ore inside the furnace. When the ore
became molten, he forced air through it by hand
pumping on the bellows.

"This arrangement goes back to primitive
times," he commented. "It's crude, but we'll have to
use crude ways until we have some tools."

When the forced air had reduced the ore to a
mass of molten iron, Captain Future added a small
quantity of carbon.

"Hey, that isn't the way you make steelite,"
objected Otho.

"We can't make a modern steelite alloy without
beryllium and other elements which we haven't got
yet," Curt retorted. "We'll have to be satisfied at
first with this old-fashioned steel."

The product of his labors for the day were two
chunks of solid steel. One, which was much larger
than the other, was roughly shaped to serve as an
anvil. The other Curt attached to a lumber wooden
handle, converting it into a crude but heavy

forging-hammer.

Joan looked a little disappointedly at these two
unlovely products of their day's toil.

"It's wonderful that you've been able to make
them, but they seem a long way off from a big,
complex space ship," she murmured.

"They're the seeds of a space ship," Curt told her.
"You have to crawl before you can walk. Remember
that we're starting here completely
empty-handed. That means that we're forced to
retrace a lot of the steps by which thousands of
generations of men ascended from the discovery of
fire to the building of space ships."

All during the next two days, he kept their
improvised furnace and forge at work. McClinton
was his chief helper, while Otho untiringly pumped
the bellows and Grog utilized his huge strength in
bringing fresh masses of ore from the surface
working they had discovered.

Kim Ivan had detailed a party of the mutineers to
dig that ore and help transport it to the camp. The
Brain was away from dawn till dark each day,
searching the face of Astafall for the other needed
elements. He had already managed to locate
deposits of several of them.

The first thing which Captain Future beat out
upon their forge was the steel framework for a
larger and more efficient smelter. When that was
going, a larger amount of better quality steel began
to result.

"We're still only in the first stages of tooling up,"
Curt declared. "We can't really make any start on
ship-building until we have atomic power and an
atomic smelter for turning out high-grade light
alloys."

"Why don't you start on that right away, then?"
Joan wanted to know. "Be reasonable, woman,"
pleaded Captain Future. "An atomic power set-up
requires certain chemicals which we can't dig out
until we have strong steel tools for mining."

THEY were concentrating now upon making
tough steel picks, bars and other tools for
mining operations. Each tool had to be beaten into
shape upon their forge. The camp rang with the
clanging hammering.

By now, the huts had been completed and a
routine system of gathering and preparing food set
up. These last few nights had brought no recurrence
of the mysterious disappearances, although several
others beside Kim Ivan had complained of

menacingly oppressive dreams. The stockade gate was guarded each night by a couple of the miners.

"Now," said Captain Future on the fourth morning, "we can start mining copper and the other elements we need for the next step."

"I told you of the copper-ore deposit I found," said the Brain. "But I've still not located any calcium, beryllium or lead."

"Let me scout for those and the other elements we still lack," begged Otho. "I can maybe find them where Simon would miss them."

"All right, you can prospect the chasms northwest of the volcanic area," Curt acceded. "The rest of us will start copper-mining today."

Otho departed upon his prospecting mission. Captain Future, Grog, McClinton and Ruh Quill gathered their new tools and started out for preliminary work upon the copper deposit the Brain had located. Joan was ready to accompany them, but Curt firmly overruled her this time, leaving her standing rebelliously outside the stockade. But before they had gone far through the jungle, he stopped.

"I thought I heard Joan calling," he said. "Listen!"

They heard Joan's voice raised sharply again, in an exclamation that had more of anger than fear in it.

Instantly Curt plunged back through the jungle the way they had come. When he came into sight of the stockade, a sudden tide of red fury pulsed through his brain.

Joan was struggling angrily in the arms of Moremos. The green-skinned Venusian was laughing as he drew her toward him.

"You are a little wildcat," he chuckled.

In all the years, Captain Future had killed more than one man. But always he had slain as the personification of stern, icy justice. He had almost never before felt the hot, raging desire to slay that now flung him forward.

Moremos thrust the girl away and recoiled startledly. Next moment Curt had him by the throat. The Venusian fought furiously, a savage hate flaming in his eyes as he sought a deadly swamp-man's grip.

"Curt, wait!" Joan pleaded appalled by the terrible expression upon his face, one she had never seen there before.

Captain Future did not even hear her. The raging

desire to kill had momentarily made him forget all his own skill in super ju-jitsu. He broke Moremos' deadly grip by sheer strength, and slammed the Venusian down to the ground like a doll. His fingers tightened on the man's throat.

Then big hands gripped Curt's collar and pulled him back off the Venusian. Grabo and a score of the other miners had come running from the camp.

Moremos staggered up, his face livid, his voice a choking gasp. "Future. I'll pay you for this, too. It adds to an old debt."

"Let go of the Chief!" roared a new voice. Grab had followed Curt back and now charged on the scene, ready for battle.

"What the devil's going on here?" bellowed Kam Ivan. The big Martian was pushing his way through the crowd.

"Future was trying to kill Moremos!" squeaked fat Boraboli.

Curt made no explanations. But his voice was a throbbing whisper as he spoke to the Venusian.

"If ever you so much as touch Joan again, nothing will stop me from killing you."

A growl came from the miners. Their deep and ancient feud against Futuremen and the Patrol flamed quickly to the surface.

At that moment came a low, grinding roar from far beneath their feet. The ground quavered slightly under them, and then shook wildly.

The powerful and unexpected shock threw them from their feet. They heard the crash of some of the huts collapsing, and a section of the stockade near them fell inward.

The fat Uranian miner uttered a screech and there were cries of alarm from others. Curt Newton, scrambling to Joan's side, felt the ground rolling and heaving sickeningly under them. Then the shocks subsided, and the grinding roar of diastrophism died away.

"Gods of space, that was the worst tremor yet!" gasped Grabo.

They looked at each other in a tense silence. All realized that the quakes were now growing stronger as Astuffall approached near the critical distance from the System at which it would be shattered and destroyed.

Otho had set out in high spirits upon his prospecting expedition that morning. The restless android, always impatient of monotony had

been chafing during the last few days of steel-making.

He swung eastward through the jungle and then started around the rim of the great region of earthquake-riven chasms and smoking black lava-beds whose center was the towering double range of active volcanoes. As he moved along, he mentally listed the raw materials they still lacked.

"Cobalt, beryllium, lead, calcium, and about a dozen others," Otho thought ruefully. "We might do without a few of those in a pinch. But there just can't be any space ship without beryllium and calcium."

Beryllium was important, for it was the chief ingredient of the metallic alloy whose strength and lightness were necessary for the construction of a space ship hull.

Calcium was even more vital. A small amount of it was an absolute necessity before a ship's cyclotrons could operate to produce atomic power. For calcium was the only inhibitory catalyst that could control the production of atomic power from copper, and prevent a disastrous explosion.

"So it's up to me to find the stuff," the android told himself determinedly.

The Brain had sketched for Otho a rough diagram of the chasms around the volcanic region.

Many of these Simon had not closely explored.

Otho began a systematic exploration of them. The ribbony android could climb like no other being in the System.

He went down into the first chasm by imperceptible holds on the jagged wall.

His keen, scientifically trained eyes stared in the dark to inspect the rock formations.

With the small steel hammer he had brought, he tapped loose samples here and there. A streak of bluish ore he uncovered at one spot proved to be cobalt, one of the necessary materials. But he found none of their other requirements in that chasm.

He clambered back up out of it and stood panting upon its rim, looking a little dazedly across the wilderness of lava and crevasses.

"No wonder Simon couldn't explore all these cracks," he thought. "I've poked myself a job."

He resolutely went on to explore the next chasm. But in it, he found nothing at all. Otho felt increasingly worried about the lack of beryllium and calcium as he climbed back to the surface.

The beryllium would soon be needed for hull-construction, and a few pounds of the calcium

catalyst *must* be found before their projected ship could leave this world.

As he reached the surface, he suddenly recoiled. A half-dozen weird creatures had emerged from the jungle and were silently marching across the lava-beds nearby. They looked like gigantic centipedes.

Then Otho recognized them as a band of the Cubics, the weird little cooperative cubical creatures they had already seen. The things had grouped together into the centipedal formations.

They were solemnly crossing the lava-beds toward the towering double range of volcanoes.

"Now what the devil are they going out there for?" Otho wondered. "They must know it's dangerous around the volcanoes."

The Cubics were heading toward the gigantic canyon between the volcano-ranges, that which the castaways had named the Canyon of Chaos.

The weird creatures approached a point some distance along the rim of that terrifying abyss, and then disappeared down into it.

"Holy space-maps, what reason can they have for entering that devilish place?" muttered the android.

MYSTIFIED and intrigued, Otho started out across the lava-beds after the Cubics. He poked his way as they had done, across the hot expanses of solidified lava.

Swirling smoke made him cough and gasp for breath. But he pressed on until he reached the rim of the Canyon of Chaos at the point where the Cubics had entered it. He peered down into the abyss.

The Canyon was a fearsome spectacle. Many miles long, a mile in width, and almost that in depth, its gloomy rock walls sank downward almost vertically everywhere. Far below, a glowing, narrow river of crimson lava crawled along the floor of the titan gorge.

Sulphurous smoke and blasts of superheated air screamed up from its depths. The lava river at its floor, Otho perceived, bubbled up from fiery springs at the north end of the canyon and flowed down its length and away through an underground chasm at the southern end.

"But where did the Cubics go?" he muttered, trying to peer down through the rushing smokes.

Then Otho perceived that a precarious pathway led downward from where he crouched, along the steep wall below him. The creatures he had followed had obviously descended by that path.

He was on the point of starting down after them, when he glimpsed them returning up the pathway. At once Otho ducked behind a mass of rocks for concealment.

The Cubics, still joined in groups to form the centipede-like figures, emerged laboriously from the abyss. But now each of these cooperative figures carried with it a chunk of rock shot with gray metal.

"That rock is lead-bearing," Otho thought swiftly. "That's good—we need lead. But what are they going to do with it?"

There was no apparent answer to that riddle.

The Cubics started marching back across the lava-beds toward the jungle with their burdens.

Otho remembered now that when they had first encountered the Cubics the little cooperative creatures had been carrying similar chunks of rock with them.

"Why, they come to this canyon for lead-bearing rock!" he thought astonishedly. "They must be more intelligent even than we figured. Wonder what they do with it?"

He decided at once to enter the abyss and locate the source of the lead ores.

Lead was one of the needed materials they had not yet located. And there might well be other required substances down there.

Yet even the hardy Otho hesitated a few moments before entering that fearsome abyss. The smoke and scorching air threatened to asphyxiate even his tough lungs. His own respiratory system was much more resistant to fumes and gases than the ordinary human's. Still, he took care to make himself a rude respirator from strips of cloth which he tore from his jacket and bound across his nose and mouth.

THEN Otho started down the pathway. It was so precarious, and had so many sections torn out of it by recent seismic convulsions, that only the agile and/or creatures like the Cubics could possibly descend.

Smoke-laden winds shrieked and howled upward around him, as he made his way slowly down. Hot ashes rained constantly upon him, from the showers cast up constantly by the towering volcanoes that flanked the canyon. The evil glow of the lava river far below seemed to yawn for him.

Otho kept on. Presently he descended a big ledge or shelf in the vertical wall close beneath him. In a

few minutes, he was standing upon this ledge. He looked wonderingly around.

"Imps of the Sun, the Cubics never did all *that*!" he exclaimed.

There were ancient mine-workings upon this ledge. Tunnels had been driven back into the rock wall for a dozen yards, and marks of the tools which had dug them were still evident.

It was obvious that the purpose of the tunnels had been to tap several rich veins of metallic ores here. Otho's trained eyes at once recognized the glittering streaks in the rock.

"Not only lead deposits, but also beryllium — and plenty of it!" he exulted. "Now if we can only find the calcium and a few others, we're all set as far as materials are concerned."

Then wonder returned to conquer his exultation. Who had dug these shafts? Who had mined here for lead and other metals?

It could not have been the Cubics, he thought. These cooperative little creatures appeared not to make use of tools. They apparently came down here and secured chunks of the lead-bearing rock which had already been loosened by the ancient mining operations.

CHAPTER XI

Cosmic Mystery



OTHO advanced into one of the shafts. Something upon its wall caught his eye.

It was a smooth plate of pure lead, affixed to the rock. He discovered that it was engraved closely with unfamiliar symbols.

"Why, that's *writing*!" he exclaimed. "Then whoever did the mining here long ago were intelligent creatures — maybe humans."

He pried the soft lead plate out of the rock and excitedly examined its engraved characters. They were not, of course, in any language of the Solar System. Here was a cosmic mystery, indeed!

"The chief and Simon will be plenty excited by this thing," Otho thought. "And by the beryllium

and lead I've found."

At that moment, there came a slight quivering of the rock walls around him. It put him instantly on the alert.

"Better get out of here, and tell the others about this!"

At the moment the words left his lips, he was thrown from his feet by a terrific shock. Flattened upon the floor of the ledge, he heard an awful grinding roar as the whole Canyon of Chaos rocked wildly.

It was the same unprecedentedly strong quake which at this very moment was so startling to the other Futuuremen and the mutineers, back at the camp. But it had disastrous effects here.

Otho heard a cracking, crashing reverberation from above as he struggled to his feet on the swaying ledge. He looked up. A whole vast mass of the canyon, wall above him had been split loose by the shock and was falling toward him.

With a smothered yell, Otho plunged into the nearest of the ancient mine-tunnels. He was not a moment too soon. A shower of boulders crashed down upon the ledge, as a huge mass of the rock above split loose and fell.

The shock gradually died away. Otho picked his way out onto the rock-shewn ledge, and then uttered a cry of consternation.

"Now how am I going to get out of here?"

The violent quake had split off a great section of the rock wall just above the ledge, destroying the precious path upward. There was a great cleft in the wall there, which even Otho could not hope to climb. He was trapped upon the ledge.

Otho, as he looked around in dismay, became aware of a louder roaring and hissing beneath him. He peered down into the canyon.

His dismay became acute. The molten lava river down there at the floor of the abyss was rapidly rising. The shock had opened new rifts by which the liquid lava was pouring into the bottom of the canyon faster than the single narrow outlet could carry it away.

"Holy sun-amps, this is a real jam!" muttered the android. "That lava will be washing over this ledge in an hour."

He peered intently through the swirling smoke, endeavoring to discover some way of escape from the ledge. There was none. And the lava continued to rise relentlessly.

How to get help? Captain Future and the others

didn't even know he was down here in the Canyon of Chaos. He had to signal them somehow. How?

"I'd give my right arm for a rocket signal-pistol right now," he thought.

That thought brought a vague possible expedient into his fertile mind. There *might* be a way of signaling the others.

Hopefully Otho began searching through the mass of broken rock that now littered the ledge. He finally found some chunks of a rock that he thought might be suitable for his purpose. It was a tawny stone streaked with rich veins of orange mineral.

Otho experimentally tossed a small piece of it down into the rising lava. As the rock melted and vaporized in the molten river, a small puff of orange-colored smoke shot up from it.

"Yes, that might do it," Otho told himself. "Here goes, anyway."

HE assembled a number of chunks of that orange rock. Then he began tossing them down into the fiery lava.

He dropped them in a certain order: first a small chunk, then a large one, then two small ones, and so on.

From each chunk of rock, as it melted and vaporized, a brilliant puff of orange smoke shot up through the swirling flames to the surface above the canyon. The succession of short and long puffs of orange smoke were spelling out Otho's message in the Futuuremen's code.

"I-n C-h-a-o-s C-a-n-y-o-n-o-o-m-e k-q-u-a-c-k-l-y--"

He came to the end of his message. Hopefully, he peered up through the drifting smoke. Those distinctive orange puffs should have been visible from a distance. If the others had only seen them.

But no one came to answer his signals. His hopes declined. And the molten lava was still rising. The heat was becoming terrific. He assembled more chunks of orange rock and repeated his smoke-puff message.

Again he waited. There was still no answer. And the crimson tide of rising lava was now only a few hundred feet below the ledge.

"Thus," muttered the undaunted android calmly, "begins to look serious. I won't have time for many more signals."

Then he discovered that he had not enough of the chemical-laden rock for even one more signal. There were only a few chunks of it left.

Otho used them to spellout a last, incomplete smoke-signal. "I-a C-h-a-o-s C-a-n-y-o-u --"

"If none of them see that, this cursed place is liable to be the end of Otho's rocket-trail," he muttered.

A few minutes passed. Then a thrill of hope shot through the android as he glimpsed a small, cubical object flying down toward him through the swirling fumes.

It was the Brain. And Simon Wright was having a difficult time to beat against the wild currents of up-steaming hot air. Otho yelled and waved his arms, and his old comrade saw and came toward him.

The Brain was quickly beside the ledge too. His square, transparent "body" hovered in the air, his lens-like eyes estimating the desperate situation as Otho explained his predicament.

"Humph, it's lucky for you that I saw your last smoke-signal," said Simon. "I've been reconnoitering some of the chasms northeast of here. I found some rich veins of magnesium and cadmium in one of them."

"You can talk about that later," Otho said hastily. "Right now, how am I to get out of here? That rising lava will be over the ledge soon."

"Well, I can't possibly lift you out of here," rasped the Brain. "I'll have to find Curtis and Grog."

Simon's gaze fell upon the inscribed lead plate which Otho had wrenched from the wall of the ancient shafts. "What's that?"

Otho explained hurriedly how he had found that mysterious relic of the past.

"Why, that's amazing," Simon exclaimed with deep interest. "I believe those characters have a resemblance to the Antaman language. Let me see it."

"For space's sake, Simon, forget your scientific curiosity for now and go get the others!" howled Otho.

"All right, but take care of that plate," cautioned Simon. "I don't want to see it destroyed."

"You're worrying a lot more about the cursed plate than you are about me," Otho declared, outraged.

The Brain shot up through the streaming smoke and disappeared. The lava was still rising menacingly, and the heat and fumes from it had become almost overpowering.

BUT Otho felt reassured. He had unlimited confidence in his fellow Futuermen. He crouched as far back on the ledge as he could get, gasping for breath against the choking fumes.

It seemed a long time to him before he heard a yell from above. Then a long rope made of tough vines knotted together was let down to him. The agile android instantly grabbed it and was drawn up.

Captain Future, Grog and the Brain greeted him diversely when he thankfully emerged onto the rim of the Canyon of Chaos.

"So we had to pull you out of another crazy jam!" said Grog loudly. "What the devil were you doing poling around in this place?"

"Did you find any beryllium or calcium, Otho?" Curt asked.

"I found beryllium, lead and some other metals in plenty, but it won't do us any good now," Otho answered ruefully. "Look, the lava down there is covering the whole ledge."

"That doesn't matter -- we can trace the beryllium vein and mine it from up here," Captain Future assured. "What about calcium?"

Otho shook his head. "No sign of that."

Curt frowned. "That's not so good. We've now found almost every element we'll need, except calcium. And we haven't found a grain of it."

"You saved the lead plate?" the Brain asked Otho anxiously. "Curtis, look at this."

Curt was as astounded as Simon had been when he learned of Otho's discovery of the ancient mine-workings, and inspected the plate.

"You say the Cubes were taking chunks of lead-bearing rock out of the place?" he repeated, puzzledly.

"Yes, but the Cubes never sank those shafts," Otho replied. "It was done ages ago, by the look of them."

"This *is* a mystery," Captain Future said thoughtfully. "It seems that Astafall once had an intelligent human or semi-human race. Who could they have been? How long ago did they exist on this planetoid?"

"Don't the symbols on that plate look something like the characters of the Antaman language, that we learned on our quest for the Birthplace?" the Brain keenly asked the red-haired planeteer.

Simon was referring to a previous adventure of the Futuermen, an epic quest amid the more remote stars of the galaxy for the Birthplace of Matter.

During that quest, they had had contact with natives of the star Antares' worlds and had learned something of the Antanan language.

"It does look a little like Antanan," Curt admitted.

"Maybe there are Antanans hidden on Astarfall yet?" Grag proposed. "Maybe they're the mysterious Dwellers that Rollinger keeps raving about?"

"That doesn't seem possible," Curt muttered. "Yet there is some great riddle about this planetoid which we haven't guessed."

"I think that with sufficient study I could partially translate this inscription," said the Brain quickly. "It might tell us something."

"Later on, Simon," Captain Future agreed. "We've got too much work on hand right now, starting construction of a ship. You all know what that shock meant. It meant that Astarfall is sweeping toward doom!"

The day was already far advanced, but before they returned to the encampment, they had used their geological knowledge to trace the beryllium vein to one of the chasms some distance from the volcanic area.

WHEN they entered camp, Curt stiffened. Moremos was coming toward them. The Venusian spoke earnestly:

"Captain Future, I want to apologize for molesting the girl this morning. I was clear out of control."

The Futuremen and the other mutineers who heard were equally astounded. But Curt Newton eyed the Venusian unforgivingly.

"Then I'm to understand that you've had a change of heart?" Curt asked dryly.

Moremos shrugged. "There's no love lost between us, you know that as well as I do. But we're all in the same boat, and Kim Ivan gave his promise to you that there'd be no trouble. I'll stick by that."

When the Venusian had gone, Otho, looked after him surprisedly. "I never thought that he would knuckle down."

"He's only nursing us along until we have built a ship and got away from here," Curt predicted. "We're his only chance of escape, and he's smart enough to realize that. But once away from Astarfall, look out! That Venusian hates me worse than anyone else here. Anyway, there shouldn't be

any more trouble to interfere with our work."

CURT was wrong. That very night, three more men disappeared inexplicably from the camp.

The disappearances were not discovered until after breakfast the next morning. Then Grago, who was assembling his foraging party for the day's work in the jungle, discovered that one of his men was missing. A quick check disclosed that two others of the mutineers were gone also.

The disappearances were utterly baffling this time. For the stockade of high, pointed poles now formed a complete enclosure around the camp. The only gate through it had been guarded all night by old Tullius Thum and George McClinton. And both the old pirate and the prune-loving engineer insisted that the three missing men had not gone out the gate.

"We sat with our backs to that gate all night!" Tullius declared.

"That's r-right," stuttered McClinton. "I was t-trying to convince Tullius Thum of the f-food value of p-prunes. We were awake all the t-time."

"Those three men *must* have gone out the gate. It's the only way out of the camp, and they're not here now!" swore Kim Ivan.

Boraboll's teeth were chattering with fear as the fat Uruman suggested, "Those Dwellers Rollinger raves about took them for sure."

"How could your supposed Dwellers enter the camp if they didn't come through the gate?" Captain Future asked incredulously.

"They might be queer creatures of the ground, who could tunnel up through the soil," advanced the terrified Uruman.

They made a thorough search of the whole surface of the knoll. But though they inspected every foot of the ground, and even stirred the soil around the sills of the huts and the roots of the giant cacti, they found no traces of such mole-like monsters as Boraboll suggested.

"That settles it," muttered Grago. "The Dwellers must be invisible mono-sters of some kind."

"Even invisible monsters couldn't come through a closed gate," slowly reminded Kim Ivan.

"If you ask me," drawled Ezra Gurney earnestly. "I still say that the Dwellers are none other than them Cubes. They could get in where nothin' else could, by breakin' up and shippin' in one by one."

Some of the castaways were struck by this idea.

Graho said, thoughtfully, "The Cubes' community must be near here in the jungle. We've glimpsed the creatures several times when we were out foraging."

Curt shook his head. "Even if the Cubes could get in, they couldn't take three men out through the stockade like that."

He turned to the Brain. "Samon, you never sleep. Did you hear or see anything during the night?"

"No, lad," was the reply. "I spent the whole night attempting to translate that Antanan lead tablet Otho found in the Canyon of Chaos. I was too engrossed to notice anything."

Neither had Greg, it developed, heard anything. All their attempts at solution of the menacing mystery seemed to end in a blank wall.

"Well, I don't see that we can do anything but double the watch from now on at the gate of the stockade," Curt said. "We've got too terrific a job on our hands to lose time investigating now."

In fact, the task ahead was beginning to look impossible even to the indomitable planeteer. They had spent nearly a week with little more to show for it than an array of steel tools. And within seven more weeks, Astarfall would be shattered as it approached the dreaded Lunat.

FUTURE drove the work that day with a fierceness of purpose born of dreadful apprehension. He pressed into service all of Kam Ivan's followers except those engaged in the task of maintaining the food supply.

He divided them into two parties. One engaged in mining copper ore from the chasm in which the Brain had located a deposit. The other party began excavating lead-bearing minerals from the vein which Captain Future had traced from the Canyon of Chaos.

"Future, I'm not lacking, but it seems to me we're not *getting* anywhere on a ship," said Kam Ivan, wiping sweat from his brow. "What are we digging all this lead for? You can't build a space ship of lead."

"You can't build a ship," Curt countered, "without an atomic smelter and forge to turn out your beams and plates. It would be hopeless to try doing it by hand. Therefore, our first need is an atomic smelter."

He added, "That's what the lead is for. To make a cyclotron for production of atomic energy, you have to have inerton. Nothing else will withstand

the explosion of disintegrating atoms. And inerton is a compound of lead and other elements."

"But why have you got the other lads digging copper?" the big Martian wanted to know.

"Because a cyclotron's heart is the electric apparatus that explodes its unstable atomic fuel by a powerful charge," Captain Future answered. "Electrical apparatus means coil-wire and condensers, and they mean copper."

He concluded grimly. "And that's only the half of it. We'll also have to have calcium and a half-dozen other substances before we can get going. And we haven't even found some of them yet."

"You make the thing sound impossible," growled Kam Ivan discouragely.

Curt smiled grimly as he stooped again with his pick at the toilsome work of loosening masses of the lead-bearing rock.

"Cheer up, Kim. Once we manage to get a eye built, things will go a little faster."

Yet Curt Newton himself felt dark apprehension all through the long day of back-breaking toil. An icy premonition of possible failure oppressed his mind.

Had he, for once, set himself and the Futuremen too gigantic a task? To build a space ship out of *nothing*? And to do it within a terribly short time-limit, with dangerous criminals who hated him for workers, and with a malign mystery of this alien world menacing them?

He let none of the others see his doubts. He kept his men confident in spite of his bone-crushing weariness, as they dragged their masses of lead and copper ore back to the camp at the end of the day.

CHAPTER XII

Who Are the Duelists?



KIM IVAN came to Curt as darkness fell.

"I've put a couple of men on guard at each side of the stockade tonight," he announced.

Curt nodded. "I'm going to keep watch myself tonight also, Kim."

"I'll watch with you, then,"

the big Martian declared. "Though space knows I'm tired enough to sleep a week."

The Brain had a discouraging report for Captain Future that night Simon had spent the day exploring the more distant chasms in search of the few elements they still lacked.

"I still can't find any traces of calcium, lad. There just doesn't seem to be any of it on this world."

"That's bad," Curt admitted. "We simply have to find a little of it, or no space ship we build will ever take off."

His thoughts were somber as he sat with Kim Ivan outside one of the huts later and kept watch upon the sleeping camp. Except for an occasional shuffle of movement by the guards around the stockade-gate, and the low medley of bird and animal noises from the jungle, it was silent.

The great drift of stars that belted the night sky shed a vague light upon the camp. The gigantic, barrel-shaped cacti nearby threw grotesque shadows. Near the fire posed the strange, cubical shape of the Brain, intently studying by the firelight the inscribed lead tablet of mystery.

Kim Ivan woke from a growing drowsiness at a low, wailing sound. "What's that?"

"Only Rollinger starting again," Curt answered in a low voice.

The raving mutter came from the hut in which Grog kept patient watch over the bound madman. It rose slowly in pitch, grew more frantic.

Captain Future suddenly stiffened. Joan Randall had just emerged from her hut into the starlight. She started to walk in an oddly rigid, mechanical stride. Her face was white and expressionless.

"Joan, what's the matter?" he called anxiously.

There was no answer from the girl. In sudden alarm, Curt sprang to her side and grasped her arm. "Joan!"

Joan struggled to free herself of his grasp, for a moment. Then she suddenly shuddered violently, and looked wildly around.

"Curt!" she gasped. Quivering, she clung to him. "Curt, *they* had me! They were drawing me out to them."

He soothed her. "Relax, Joan. You've just had a nightmare, and started sleep-walking."

Her fine face was pallid with horror. "No, Curt-- it was more than a nightmare! In my sleep, they hypnotized me somehow, drew me!"

Captain Future's brows knitted together. "Tell me

just what happened. Who or what are 'they'?"

It was some moments before the shuddering girl could speak calmly. The stamp of a terrible experience still in her dark eyes.

"I don't know what or where they are," she said breathlessly. "All I know is that soon after I fell asleep, I began to feel cold, powerful hands that somehow were reaching out to grip my hand."

"Say, that's what I felt a little of in the bad dreams I had the other night," Kim Ivan interrupted hastily. "It was so bad, I woke up. Some of the other chaps had the same kind of dreams."

"But I didn't wake up. I *couldn't*, though I wanted horribly to," Joan gasped. "The icy grip of those mental attackers held me just as a rabbit is held by a snake's eyes. And just like a hypnotized rabbit, I felt myself getting up and walking out of my hut. I knew that I was walking toward something awful, but I couldn't stop until you awoke me, Curt."

CAPTAIN FUTURE was thoughtful as he held her protectingly in his arms. He looked over her dark head at Kim Ivan.

"I begin to see now," he muttered. "The Dwellers, as Rollinger called them, are creatures who somehow use tremendous telepathic power to draw victims toward themselves. There's no other explanation."

Kim Ivan looked scared. "You mean that something or things out there in the jungle reached in here with hypnotic telepathy and dragged out all our men that disappeared?"

"But whoever heard of a creature of prey that drew its victims to it by hypnotism?" exclaimed Otto.

Curt shrugged helplessly. "The life of this planetoid has followed freakish paths of evolution, for some reason."

"I'm still better that them Cubes are what's doing it," muttered Ezra Gurney darkly.

The commotion had aroused many in the camp. They seemed stricken by a chill horror as they speculated upon the mysterious Dwellers who somehow could reach into the camp by telepathic power to seize their prey.

"You'd notice," Curt Newton commented. "that none of us are ever mentally attacked when we're awake. It's only in sleep when the conscious mind is no longer on guard that the Dwellers make their telepathic attack."

"M-m-maybe that explains why R-ollinger is more sensitive to the th-things than we are," stuttered George McClinton. "His c-conscious mind is so shattered that he has n-n-no guard against the Dwellers."

The Brain had joined them. And Simon Wright now imparted news to them.

"I've been trying to translate that Antarian tablet which Otho found. It's extremely difficult, and I've only translated a few phrases here and there. But what I've deciphered seems to refer to predatory creatures who use mental attack to seize victims. Undoubtedly, the Dwellers."

"If you can translate all of that, it might tell us more about the Dwellers and identify them for us!" Captain Future exclaimed. "There's some tremendous riddle about this planetoid and its strange forms of life. The lead tablet may prove the key to the riddle. Keep working on it, Simon."

There seemed nothing more they could do to protect themselves until they should have found some clue to the identity of their attackers. And the work that engaged them was too vital to halt for any reason.

During the next days, the Futuremen kept their improvised shelter running full blast. With painful slowness, they managed to refine a considerable quantity of copper, lead and other necessary metals.

Curt kept Kim Iwan's men at work mining and bringing in more of the ores. The miners swore at the labor of the task, but were too conscious of the life-or-death necessity of it to refuse. Twice, strong tremors shook the surface of the planetoid those few days. And the activity of the volcanoes nearby seemed becoming ominously greater.

During these few nights, they had no more attacks from the mysterious enemy and no more disappearances. They were nearly all on the watch the first nights. But nothing happened. It was as though the Dwellers were aware of their watchfulness, and would not make their telepathic attack when the humans were on guard.

Grabo and his foragers found no clue to the identity of the Dwellers in the jungle. "We've kept our eyes open, but we haven't seen any creatures who might be them," reported the Jovian. "Except for the Cubes and those big rodents and birds, there isn't much animal life here — just a wild mass of those tangle-trees and other devilish queer plants."

"If we could spare the time to beat thoroughly

through the jungle we might find the Dwellers," Curt said.

"But we can't. The days are going by and we still have't even started real construction of a ship."

The work of preparation for construction seemed, indeed, agonizingly slow. The terrific necessity of building every tool, mechanism and instrument they needed was making big inroads into their limited time.

Captain Future and Grab and Otho and George McClinton had begun building the first cyclotron, or atomic power generator.

FIRST, they had had to go back to steel-making and forge big crucibles of heat-resistant steel. With these, they could handle the softer metals of lead and copper and others, when in a molten condition.

Curt built up a clay mold, with infinite care. Into this they poured molten mertron, the alloy composed of lead and tempering elements. When the metal had cooled, they broke open the mold and had a small but massive cylindrical shell of mertron. This was to be the main power-chamber of the cyclotron. The only openings in the cylinder were the small ones at the top for the fuel-feed and injector, and the bigger one for the power-take-off.

"Now to cast the fittings," Curt said. "The fuel feed-lines and the power take-off lines all have to be mertron, too, as well as the valves. And our only way to get 'em is to cast 'em. We've got the elaborate equipment that you need for machining mertron."

"Oh, L-L-Load," groaned George McClinton. "I've worked with eyes for years, b-b-but never realized what it was to b-b-build one."

While they toiled to finish the fuel-feed, injector and power-leads, the Brain was hanging out every day to explore the chasms and gorges.

Calcium was what Simon was looking for, most of all. The vital catalyst was imperative. If they were to utilize the tremendous atomic energies locked up in copper. But the Brain reported no success.

"I am beginning to fear," said Simon, "that there is no accessible calcium on Astarfall."

Curt bit his lip. "We've got our makeshift eye almost finished. But we can't use copper fuel in it until we have a little calcium."

Copper was the fuel most ordinarily used in cyclotrons. That metal released more atomic energy when disintegrated than did any other ordinary

substance. It released so much energy, indeed, that it would blow any cyclotron apart unless its disintegration was slowed down by calcium.

"We c-c-could use iron for fuel, instead of c-c-copper," McClinton suggested. "It won't p-produce half as much power as c-copper would, but it c-could be used w-without the c-calcium catalyst."

"It's what we'll have to do, to get going," Captain Future agreed. "But we still must have calcium! Only copper will release enough energy to power a space-ship! Unless we get a little calcium, any ship we build will never take off."

He put McClinton to work upon easing the merlon valves and fittings. The lanky engineer labored diligently, stopping only to munch a few of his dried prunes now and then.

"They g-g-gave me energy," he defended when Joan chaffed him about his addiction. "P-people don't realize the value of p-prunes."

"What'll you do when they're all gone?" Joan laughed. "Your case is almost empty."

He looked dismal. "I know. That's why I'm w-working so hard to g-get the ship started. To get back to c-civilization and p-prunes."

Captain Future himself was engaged upon the harder job of building the electric firing-mechanism for their cyclotron.

A cyclotron is operated by disintegrating powdered metal fuel atoms into their constituent electrons. This exploding cloud of free electrons was in reality what people called atomic energy.

ONCE the disintegration process was started, it was self-continuing as long as the injector fed powdered fuel. But to start it, it was necessary to have a trigger-apparatus consisting of an electrostatic generator that would release a bolt violent enough to start the disintegration within a small trigger-tube attached to the main power-chamber.

"How the devil do we build an electrostatic generator when we don't even have a foot of wire?" Otho demanded.

"We make the wire first," Curt retorted.

"This thing gets more complicated the further we go with it," groaned the android.

But he fell to with Grog and Curt in the tremendously difficult task of drawing out the necessary wire from their supply of smelted copper.

Joan's deft fingers wove fine fiber threads from certain plants into the necessary insulation for the

wire. Curt wound the complex coils, upon wooden frames. Gradually the electrostatic generator took shape.

The merlon trigger-tube was fitted into one of the small openings of their cyclotron, with its electrodes in place inside it and with heavy copper cables running from it to the generator itself.

The generator contained the condensers for storing the charge, the transformer coils, and the copper spheres, belts and brushes of an electrostatic machine which was to be turned by a geared crank.

"We're about i-i-ready," said McClinton hopefully, at last. "I p-p-put the refined iron powder into the i-i-fuel-hopper."

Everyone of the castaways was gathered that morning to witness the test of the vital cyclotron upon which all of them had labored in some way or other. An atmosphere of tension held them.

Grog had already for some time been turning the crank of the electrostatic generator, building up the charge in its condensers. Lacking instruments, Curt had to calculate mentally the amount of charge available.

"It should be enough to fire the trigger-tube," he said tauntly. "Shove in the injector, George."

The prune-chewing engineer eagerly obeyed, pushing down the knob atop the massive little cyclotron, injecting a charge of powdered iron into it.

Captain Future instantly closed the heavy switch that broke the copper cable connecting the generator to the cyc. The stored electric charge flashed into the trigger-tube of the cyclotron.

There was a sharp detonation as the terrific electric bolt started the bit of fuel in the trigger-tube disintegrating. Almost instantly, it was followed by a rushing, vibrating roar as the process of atomic disintegration speeded to the main charge of powdered iron in the power-chamber.

Curt depressed the valve-lever atop the power take-off. From that take-off tube, a jet of pale white fire lanced out. It was a sword of atomic energy that cut deep into the side of the knoll behind the cyclotron.

"She works!" yelled Otho, his face aflame with excitement.

"By space, you've done it!" bellowed Kim Ivan. "We've got atomic power now!"

Weary as he was, Curt Newton felt a thrill of matchless pride in what they had done. In two short weeks, they had retraced the whole

history of human invention from fire to atomic power.

They had started from nothing, as the first primitive savages of Earth had done. The only difference was that they had had the *knowledge* slowly gathered by hundreds of generations, and had been able to apply it.

"N-n-now do we start laying the f-frame of the ship?" McClinton asked eagerly, but Captain Future shook his head.

"Not yet. We've got to build more cyclotrons first. We'll need them for the immense labor of actual construction. Then when we've built the ship, our cyclotrons can be installed in it as its propulsion machinery."

CURT drove the work relentlessly on in the next days, spending every possible minute on the construction of more cyclotrons. Progress was much faster now, for they could use the eye they had already built to power an atomic smelter that reduced the time of operations greatly.

But on that first night after completing the original cyclotron, two more men had mysteriously disappeared! Old Tuhins Thann and one of McClinton's engineers vanished as inexplicably as though they had been swallowed by thin air. And the stockade wall had been guarded all night!

Next night, another mutineer vanished. Few slept on the following nights, so great was the alarm and fear. Nothing happened those nights. Then the vanishings started again.

Panic halted the operations of the mutineers. Then terror was so great that they refused longer to assist the Futuramen's labors.

"There's no use of working to build a ship!" cried Bonaboli when Curt tried to get them to resume work. "Long before we get a ship built, the Dwellers will have murdered all of us!"

Curt felt baffled desperation. He had depended on the mutineers to mine the great amount of metal-ores necessary for construction. Then panic-stricken stoppage of work impended, all his hopes of building a ship in time to escape from this doomed world.

"We demand that the cursed Dwellers be found and destroyed before we'll go on working!" shouted one of the rebels.

"We can't stop work now to search for the Dwellers," Captain Future pleaded desperately. "We're behind schedule as it is. In a little more than

four weeks, Astafall is going to be destroyed."

Kam Ivan added his authority to Curt Newton's plea. "Don't be idiots!" the big Martian stormed his followers. "The Dwellers may get *some* of us, but unless we build a ship in time we're *all* finished."

Moremos nodded agreement. The Venusian murderer not to have seen the force of arguments, his logic was undeniable.

"You know I have no love for Future, but he's right in this," snapped Moremos. "We still haven't the faintest clue as to what or where the Dwellers are. We might spend weeks hunting for them without success."

But the superstitious terror of most of the mutineers was not to be allayed by cold reason. The newer danger loomed bigger to them.

"We're not going to work in those diggings all day and then be afraid to sleep at night, lest we vanish, too!" Bonaboli squeaked.

Curt Newton felt a sense of frustration. He could understand the terror of these men. But their panic-stricken was the last straw.

Unexpectedly, the Bram came to his help. Simon Wright glided to his side and spoke coolly.

"Tell them to quit acting like scared children—that I now have at least a clue to the Dwellers," said the Bram. "I've managed partially to decipher that inscribed tablet from the Canyon of Chaos."

"Simon, then you've found out something about the mystery of this place?" demanded Curt.

"Yes, lad," answered the Bram. "I have at least begun to solve the riddle of this planetoid's strange history."

CHAPTER XIII

Tragedy of the Void



FUTURE was more than a little excited by this information.

"Does that inscription identify the Dwellers?" he asked quickly.

"No," admitted Simon Wright. "But it does give a possible clue to them, if we

could decipher all the writing. You see, the inscription was the Antarian language, as we surmised. But none of us have more than sketchy acquaintance with that tongue from our brief experience with it. And this writing seems to be in a quite ancient form of it. Many terms I could not translate."

"What became of the men who left that tablet?" asked Joan wonderingly.

"I'm coming to that," said the Brain. "It appears that this little world we call Astarfall has a strange and terrible history. But I shall read you my partial translation itself."

Everyone listened with deep interest as the Brain's shrill, metallic voice recited his translation of the old tablet.

"We men of Antares colonized this small world many generations ago. This world was then the moon of a planet in the system of **** near our own star. It possessed animal resources, and to exploit those resources a band of our people settled here and established mines. Each **** came ships from Antares which brought us supplies and took away the ores we had mined.

"But then came unforeseen catastrophe. A dark star was approaching the system, **** of which this moon was a member. The passing dark star came so close that its huge gravitational pull dragged this moon from its orbit and flung it off into space. The moon left that system and drifted steadily out into the vast interstellar void.

"Our colonists had but a few ships of their own. These could contain only a small number of people. So only that small number were able to escape the torn-away moon. There was no escape for the others, for by the time ships could have been assembled and come from Antares, this drifting world was too far out in the trackless void.

"So some thousands of Antarian colonists were marooned upon this moon as it traveled steadily out into the face of the deep. They knew that they were cut off forever from their parent system, but they did not despair of life. For the radioactive core of the moon **** sufficient heat to maintain life upon it even in the endless depths of the outer void.

"Farther and farther into the vast abysses traveled the drifting moon, on into the remote **** sector of the galaxy which no ship had ever traversed. The older generation of colonists passed away and a new generation was born who had never known anything but this little world. It seemed that generation would follow generation without change, and that some day the drifting moon would reach the distant star-system of **** and perhaps attach itself to a planet there.

"But out in the face of the deep a terrible thing began to happen. The drifting moon had entered a region of terrific cosmic radiation. It was an area of space in which cosmic radiation swept in a concentrated current, due to **** and other obscure factors of space-warps. The result was that all life upon this little world was denuded by constant penetrating radiation which soon caused a subtle and fearful change.

"Evolution began to speed up terrifically upon our drifting world. The unprecedented radiation produced **** and other changes in the genes of every living species, which caused a tremendous flowering of new mutations. Each species of animal and plant life on the world began a rapid new evolution. And our human species, too, began to evolve.

"We humans became less and less human! New mutations rising among us, such as **** radically altered the nature of our species. By now it seems evident that we **** destined to evolve ludicrously onward into species entirely inhuman.

"But all the other forms of life on this world have also been evolving at terrific speed. Plant life here has developed weird new carnivorous forms of trees and shrubs, animal life has evolved into equally uncanny and alien forms, and one species of **** has evolved into such great intelligence and mental power that it has been able to menace us by means of hypnotic mental attack.

"We found a way to protect ourselves from that dreadful hypnotic attack of the ****. We still cling to life, by means of that protection. But our world is still traversing the region **** cosmic radiation, and evolution still continues to alter our human species with nightmare speed. We fear that by the time this world has finally drifted out of the region of **** radiation and the burst of evolution stops, we shall have been conquered by our evermore powerful enemies, and shall have disappeared forever. And so we leave this tablet as record of our fate should ever men of Antares manage to reach this world."

THEY were all silent for a little when the Brain finished reading his translation of the tablet. All were gripped by an overpowering sense of the cosmic tragedy that was the history of this little world.

An inhabited moon, torn away from its native system and drifting fatally out into the vast night of the interstellar void, never to return! They seemed with their own eyes to look back and see that Antarian, a man whom hideous evolutionary changes had perhaps already made inhuman, writing upon the lead tablet his tragic record of the awful fate of his people.

Captain Future broke the silence. "So that is the reason for the unprecedentedly weird animal and plant life of this planetoid! Out there in the abyss, it passed through a region of radiation that caused nightmare evolutionary change in every species."

"What do you suppose became of the people who had been human?" Joan whispered.

"They must have perished entirely," said the Brain. "No doubt despite their attempts to protect themselves, they finally succumbed to the hypnotic attacks of the new species, whom we call the Dwellers."

Otto voiced an urgent question. "That's what I'm

most interested in the Dwellers. Doesn't the inscription, tell just *what* they are?"

"Yes, if we knew that, we could hunt the devils out and destroy them," put in Kim Ivan.

"The inscription does not help us much there," demurred the Brain. "It names the species who evolved into the Dwellers. But their scientific name for that and other species is meaningless to us. There's no way I can translate their scientific terms or proper names."

"Try it anyway, Simon," urged Curt Newton. "Our safety depends on it. Until we have some idea what and where the Dwellers are, we're helpless, to do anything against them."

Ezra Gurney made an emphatic assertion. "That inscription just proves what I said before -- that the Dwellers are none other than the Cubics. It's clear as daylight. One of the animal species here evolved into these little cubic monsters, whose group-minds are strong enough to carry out those telepathic attacks."

"I still can't believe that the Cubics, are the Dwellers," Curt demurred. "They just don't appear to be of high enough intelligence. But if Simon can translate the gaps in the inscription, it will give us a clear clue to the Dwellers. Then we can act."

"I will try, but I am not too optimistic of success," mused the Brain. "I know almost nothing of the scientific terminology of the Antanan language."

"What are we going to do in the meantime?" demanded Bornboll.

Captain Future reassured him. "We'll fix up an alarm-signal around the whole stockade. Then if the Dwellers get a mental grip on any of us and try to draw us out, there'll be an alarm that will rouse the others."

That promise placated the uneasy castaways a little. Curt Newton worked hastily to arrange the alarm, grudging the time spent upon it.

He devised a strong cord of vegetable fibers, which was so looped around the inside of the stockade that anyone touching it would sound a clamorous copper gong to which the cord was attached.

"That will keep anyone from being drawn out over the wall," he pointed out. "And the gate is guarded at night. Now, back to work!"

ALL that day, Captain Future kept the others so busy that they had no time to

think of the Dwellers. They finished their battery of six cyclotrons, and started the rigging of several atomic smelters.

The smelters were big inertion crucibles into which large amounts of ore could be shoveled. A stream of atomic energy brought through mercuron pipes to each smelter would burn out the mineral impurities and permit the molten refined metal which remained to be suitably alloyed and run off into casting-molds.

"Twenty-two days -- we're behind schedule," sweated Curt Newton that evening. "We should be casting beams and plates by now. We've got to speed up somehow."

Wary as the mutineers were that night from their toil in the ore-diggings, few of them slept. Their fear of the Dwellers was too great. They sat in close groups around the fire, listening nervously for the alarm that would signify that the mysterious enemy had hypnotically seized one of them and was drawing him out of the camp.

But the alarm did not come. And morning found none of them missing. It reassured the men a little, though some contended that the Dwellers had not struck simply because they had been wakeful. The hypnotic attacks had always been made upon sleeping men.

The atomic smelters were finished this day. During his work upon the smelters, Captain Future had detailed McClinton and Gag to a special job. This was the construction of several very small cyclotrons which could be used to power such portable tools as atomic welders. They would be necessary for the fabrication of the ship.

"We've g-g-got the welders about ready," McClinton reported to Curt that afternoon. "How are you o-o-coming?"

Captain Future straightened and mopped his brow. He was grumpy, sweating, haggard-looking from the driving toil.

"We're ready to cast the keel-beam now," he said. "Otto and I have been preparing the mold."

The mutineers, returning in troops from their day's mining and dragging with them their rough sledges laden with beryllium and chromium ores, came flocking through the sunset to witness the operation.

Curt and the Brain had already sketched detailed plans for their projected space ship, working at night by firelight to draw their designs on thin sheets of lead. They had designed the simplest and

Riddle of the Jungle

smallest slap that would serve their need. And they had carefully planned so that it would require but few different sizes of beams, plates and studs.

The molds for the beams had been accurately fabricated from a perfunctory cement made of certain rocks ground to powder. To the biggest of these molds was now connected the mertron spout of the big atomic smelter, which at this moment throbbled with power.

"The alloy should be thoroughly compounded by now," Curt Newton declared. "Start her pouring, Otho."

Otho opened the spout-valve. From the spout, a dazzling stream of molten beryllium alloy poured into the long cement mold.

A cheer went up from ragged band who had gathered to watch.

"Now we're getting somewhere!" Kim Ivan exclaimed. "We'll soon have a ship to take us off this cursed world, now we've cast the keel."

"In h-honor of this occasion, t-tomorrow I'll eat the last of my p-prunes," George McClinton declared. "I've been s-saving them."

Captain Future himself was perhaps the least excited of them all. He knew only too well the vast amount of work still to be done in short time.

He turned, looking for Joan. And he was surprised not to find her. Everyone else was present, and the stockade gate had been closed for the night.

"Where's Joan?" he asked McClinton sharply.

The spectacled engineer looked startled. "Why, I d-don't know. Come to t-think of it, I haven't seen her for s-several hours."

Without a word, Captain Future started a rapid search of the encampment. By the time he had finished, night was falling.

"She's not anywhere in the camp!" he exclaimed worriedly. "And Ezra Gurney is missing, too!"



EZRA GURNEY had sat all morning brooding over a plan which had taken shape in his mind. Finally in mid-afternoon, the old marshal had risen decisively to his feet.

"I'll do it!" he muttered resolutely. "No matter what Cap'n Future says, I'm sure I'm right."

The old Planet Patrol veteran was used to action.

Ezra had spent more than forty years out in the great spaces and wild worlds. He had fought space-pirates in the old lawless days, had brought order to raw boom-towns on the interplanetary frontier, and was now the oldest and most experienced officer in the Patrol.

But Ezra was a fighter, not a scientist, and thus could be of no aid to the Futuremen in planning and building the new ship. And Curt had tactfully suggested that the work of training ore or foraging in the jungle would be too arduous for him, and had requested that he spend his days in seeing to it that there were no dissensions or fights in the camp.

"Too old, that's what he thinks of me!" snorted Ezra disgustedly. "Me, that could still show these young knaves something in a scrap!"

His iron-gray hair almost bristled with indignation, and his keen, faded blue eyes snapped.

"Maybe he thinks I'm so old I got softens!" of the beam, too," growled Ezra. "Maybe that's why he won't listen when I tell him that them Cubes are the Dwellers. I guess at that, he don't want to spare time now to reconnoiter the Cubes. Time is all I have. I'm gon' out there and scout the critters myself!"

His decision made, the old marshal proceeded to put it into effect.

Giabo and the other foragers had reported that each time they had glimpsed any Cubes, the little creatures were going to or coming from the northwest. It was logical to assume that their community lay somewhere in that direction.

Armed with a steel bush-knife forged for

Grabo's gang, he entered the green gloom of the wend forest and made his way in a northwestward direction. The great tree-fens looming around him, and the other grotesque trees and shrubs, made an immensely vasta. He wondered, fleetingly, why the jungle contained no huge cacti like those at the camp.

After a few moments of travel, he suddenly stopped. There had reached his ears a clear call from behind him.

"Ezra! Wait!"

He recognized Joan Randall's voice. And the old marshal's wrinkled face expressed dismay.

"That danged girl! She saw me leavin' the camp and she's run after me to stop me. Treatin' me like I was a runaway child!"

Indignantly, he decided that he would not argue with Joan. He would simply slip out of sight until she had given up hunting him.

With that idea in mind, Ezra hastily melted back into the jungle and sought concealment inside the thick foliage of a grotesque, towering shrub whose green limbs drooped limply like those of a weeping-willow.

Those drooping limbs suddenly came to life! They wrapped themselves around Ezra and began drawing the old veteran into the shrub.

"What the devil!" swore Ezra startledly.

He slashed hastily with his bush-knife. Sweating and spluttering with rage, he hacked through one after another of the clutching tendrils.

It took him several minutes to free himself. He finally was able to tear loose from the grip of the thing, and stood puffing some distance away.

YOU SEE what happens to you when you come slipping out here by yourself!" accused a clear, stern voice.

Joan Randall had been attracted by the sound of struggle. She stood, her hands on her hips, eyeing him severely.

"You were starting out to find the Cubes," she went on. "You've been wanting to for days. It's a good thing I saw you slipping out of camp."

"You wouldn't have caught up to me if that danged snaky bush hadn't grabbed me," Ezra spluttered. "Blast me if I ever saw such queer, evil plant-life as this world has! From the big tangle-trees down to them nasty shrubs, most of the plants here seem to prey on animals."

"It's what you get for sneaking out this way,"

Joan retorted unsympathetically. "I'm not going to let you go any further."

"Now, Joan, listen," wheedled the old veteran. "I'm don't this for Cap'n Future's sake. It's to help him that I want to investigate the Cubes."

Joan's pretty face was serious as she considered this. Her brown eyes looked thoughtfully at him.

"You're right, Ezra. We'll go out together and see what we can learn about the Cubes."

Ezra's brief feeling of triumph turned to dismay. "But you can't come along with me, Joan! Curt would never forgive me if I took you."

"Either I go with you, or you don't go at all," the girl said firmly. "Try to go on without me, and I'll shout."

"Oh, dang all male-headed women!" muttered the old marshal. "They haven't got any business out in space. When I was a youngster, women stayed on Earth and didn't go gallivantin' all over creation. All right, come on."

They started together through the jungle, threading their way through the more open glades in a northwest-wind direction.

"Grabo an' the others said every time they saw the Cubes, the critters were comin' from or goin' in this direction," Ezra explained. "They didn't think the things could live very far from here."

"I hope not," said Joan a little anxiously. "We haven't many hours of daylight left."

Ezra used his bush-knife to hack a way through thickets of vegetation around which they could not detect. But they were careful to avoid all tangle-trees and other similar carnivorous forms of plant-life with which the old marshal had so lately had his upsetting experience.

"Blast me if I don't think the plants on this world have more strength and intelligence than the animals," declared Ezra. "The way some of them growin' try to grab a person is uncanny."

"The Brain says that all this unprecedented evolution of plant-life is due to the bust of accelerated evolution when Astafall passed through that realm of cosmic radiation," Joan told him.

"Maybe so, but it still seems creepy and unnatural to me," grunted the old veteran.

They went on for mile after mile, while the shafts of pale sunlight that struck through the wend forest slanted more and more toward the horizon. They were by now penetrating into completely unexplored jungle. For Grabo and his

foraging parties had been too engrossed by the difficult task of gathering sufficient food to do any unnecessary exploring.

THEY had kept an alert eye out for the Cubics, but had so far seen none of the strange creatures. The only animal life they had encountered were a few of the rodent-like animals darting away in the thickets and a number of the bat-winged, featherless birds flying overhead.

Suddenly they struck a hard-packed, beaten trail that led due westward through the jungle. Ezra and Joan stopped, amazed.

"Why, the Cubics must have made this path!" the girl exclaimed. "You remember that Otho said the creatures seemed to be in the habit of mining 'nd taking away ore from the volcanic area east of here? This must be the path they use."

"If that's so this path would lead us right to the home or community of the Cubics!" Ezra said excitedly. "Now we're gettin' somewhere!"

Joan hesitated. The Sun was now sinking toward the horizon and the feeble daylight of the jungle was darkening into a somber dusk.

"Perhaps we ought to turn back, and return tomorrow," she suggested. "It'll soon be night."

"Turn back when we're this close?" Ezra scoffed. "Besides, night is when we want to watch the Cubics. If they're the Dwellers, it's at night that they somehow make those telepathic attacks on our camp."

The remainder of those dreaded hypnotic attacks was one not calculated to reassure the girl. But Joan had courage, and she saw the logic in Ezra's argument. Without further objection, she accompanied him onward.

Their progress was now much more rapid, for they were now following the beaten path. It ran due west except at places where it swerved aside to avoid a clump of tangle-trees or other dangerous vegetation. Those alien growths loomed dark and forbidding in the gathering dusk.

Stars were peeping forth in the darkening sky. Far behind them, the heavens were lighted by the quivering red glow of the smoking volcanoes. Presently Ezra and Joan heard a low, persistent sound from ahead. It sounded like the clash and clatter of many hammers beating upon rock.

"Must be the Cubics," Ezra said in a low voice. "But what're they doin' to make that sound?"

"I don't know," answered the girl bewilderedly.

"We're very near."

They went with much more care, following the path but ready to dart off it into the thickets at any alarm. The din ahead came louder to their ears. Then they came abruptly into full view of an amazing spectacle.

The path debouched ahead of them into a broad, flat clearing. This open plain contained the little city of the Cubics.

It was one of the strangest communities upon which human eye had ever looked. There were several scores of small buildings, built and arranged with mathematical precision. They looked like stone beehives, each having only a single opening. They were ranged in concentric circles.

Hundreds upon hundreds of the Cubics were visible in this weird little city. The little cube-shaped creatures were engaged in bewildering activity. With then queer facility of combination, they were gathered into many different figures that engaged upon several inexhaustible tasks.

There was a row of grotesque, four-armed figures twice the height of a man. They were engaged in hammering and splitting chunks of rock, using harder masses of rock for hammers. There were other figures like huge centipedes, who carried the shattered rock away and sorted its pieces.

And each of those big, grotesque figures was composed of scores of the little Cubics! An arm of one of the hammers might be made up of ten separate Cubics, hooked together. Joan and Ezra could plainly see the tiny, twinkling eyes and mouths in the faces of those constituent cubes.

"Why, this is crazy!" muttered Ezra. "Why in the name of the Sun are they workin' so hard, crushin' that rock?"

"They're crushing the metallic ores out of it," Joan said quickly. "Look -- the centipede-ones take the metal back to those big heaps."

EZRA'S eyes traveled in the direction she indicated. Behind the little Cubic city there loomed colossal heaps of small fragments, heaps big as small hills. The fragments were of metal ingots or rich ore.

"Why they must have been laborin' like this for centuries to amass all that metal ore!" gasped the old marshal. "There's millions of pounds of it, and it looks like it had been gatherin' there for ages."

He was stunned by the riddle of the Cubics'

Secret of the Cubics

tremendous toil. Then a thought occurred to him.

"Maybe this is the answer, Joan. If these Cubics are the Dwellers, maybe they've been attackin' us telepathically because we've been namin' metal. It seems like these cutlers are crazy on namin' ore themselves."

"That might be the answer," Joan admitted in a whisper. "Let's take a closer look at those big ore-heaps. We can circle around nearer."

She and the old marshal started skirting around the clearing to approach nearer that side of it on which the vast heaps of ore towered. They moved with extreme care in the dark jungle, to make no sound.

Joan was in the lead. Ezra suddenly descried a snakey movement as of tentacles in the thick foliage just ahead of her.

"Look out, Joan -- you're walking into a tangle-tree!" he shouted warning.

The girl recoiled in time. But next moment they both realized with dismay that the clatter of the Cubics' activity had suddenly halted.

"They heard me!" Ezra groaned. "We got to beat it out of here on full-rockets!"

They scrambled back toward the path and started a hasty retreat away from the Cubic City. But it was too late.

Cubics who formed big centipedal figures were already racing along the path after them. In an instant they had overtaken and surrounded the old veteran and the girl.

Before the horrified eyes of Joan and Ezra, the Cubics who formed those figures abruptly shifted into new, towering formations. They became giant, semi-human shapes who advanced on the two humans with clutching arms.



NO SOONER had Captain Future discovered the absence of Ezra and Joan from the camp, than he realized that it had but one logical explanation.

"Ezra's slipped off to spy on the Cubics!" he exclaimed. "He's been wanting to for days. He thinks they're the Dwellers."

"B-b-but M-m-miss Randall!" asked George McClinton anxiously.

McClinton's deep solicitude for Joan's safety was obvious -- as obvious as the shy, whole-souled admiration which the stuttering engineer had shown for the girl agent since the beginning of the *Vulcan's* voyage.

"Joan would go after him if she saw him leaving camp." Curt guessed. "But I would have thought she'd have brought him back by now."

"Ezra can be plenty mule-headed when he gets an idea into his head," reminded Otho. "He probably insisted on going on, and she went along!"

Curt was thoroughly alarmed. Night was already falling upon the jungle. He knew from experience what uncanny dangers it contained.

"Otho, Grag -- get picks for weapon and come on!" he said swiftly. "We're going after them and quicky!"

He was himself grabbing up one of the steel bars. They hastened toward the gate of the stockade, and found that others had come with them.

Grabo, the Jovian mutineer, was one of them. "I know a path in there that I think leads toward the Cubics," he said. "I'll go along and show you."

"And I'm g-g-going, too," George McClinton insisted.

Kim Ivan was already opening the gate of the stockade, and the big Martian pirate swung along with them as they rapidly entered the jungle.

Grabo led the way through the dark fern-forest, avoiding tangle-trees and other dangers whose location he knew. They soon reached the path.

"We never followed it very far, but we've seen the Cubies using it," the Jovian informed.

"Here's a fresh slash by a bush-knife," called Otho, bending over a hacked vine that had until recently lain across the path. "Ezra and Joan must have gone this way, all right."

Curt's anxiety mounted by the minute as they hurried westward along that beaten trail.

"Bugging off into this jungle by night, as though she was strolling around in a Venusian park!" he exclaimed.

"Listen!" said Grog suddenly, after they had traveled some miles.

The super-sensitive microphonic ears of the robot could pick up sounds no one else could hear. Grog stood, a towering, gleaming silhouette in the starlight, motionless and listening.

"I can hear a lot of activity from somewhere far ahead," finally reported the robot. "It sounds like rock being shattered."

"You're crazy!" Otho jeered. "Who the devil would be pounding up rock here in the jungle?"

"The Cubies wouldn't be -- or would they?" Kim Ivan wondered. "Come to think of it, they're always carrying rock when you see them."

Captain Future imperatively enjoined silence, and led the way on along the path toward the west. Presently he and the others could also hear the distant sound of clashing rock that had reached Grog's ears.

A FEW minutes later found them crouching at the edge of the jungle and looking out at the starlit little city of the Cubies, with incredulous astonishment. The stone beehive structures, the hordes of Cubies engaged in crushing rock ores, the towering heaps of crushed ore behind the village, all stunned them as they had so recently dumfounded Ezra and Joan.

"Why, those Cubies are gundung out ore!" Otho gasped. "And look, when they get it crushed out, they simply carry it over to those big heaps and dump, and then go get more. They're balmy as Martian fool-monkeys!"

"I'll be blasted!" Kim Ivan was swearing in a whisper. "Why would the little creatures crush out all that ore when they haven't any use for it?"

"I see Joan and Ezra!" Grog announced. "Look, Chief!"

With sharp relief, Curt Newton perceived that Joan and Ezra were sitting on the ground in front of

one of the little stone beehive buildings. A ring of Cubies surrounded them, guarding them. Obviously, the Cubies had taken the girl and the old marshal prisoner but had not harmed them.

"They've not been hurt," exclaimed Otho in a low voice. "Now all we've got to do is to crash in there and bring them out."

The android raised his steel weapon, as he and Grog and the others prepared to follow Captain Future in a sortie into the community. "Wait a minute," ordered Curt Newton. There was a strange, frozen look on his face.

Curt's eyes had been traveling over that bustling, inexplicable scene. And a possible explanation of it had entered his mind, one whose implications were paralyzing.

The possibility that had occurred to him sent through him an icy horror such as he had almost never before experienced. He seemed to see behind this half-comic, purposeless activity of the Cubies, a ghastly story.

"Good God!" he choked. "If I'm right, we're looking at the most awful scene our eyes have ever rested on."

"Chief, what are you talking about?" whispered Otho. "I can't see anything awful about those Cubies breaking up ore for metal; they don't know how to use it. It seems funny, to me."

"Yes, and look at the big heaps of it they've piled up," chuckled Kim Ivan. "They must have been doing this for hundreds of years."

"Yes, for hundreds of years," muttered Captain Future. His face was pale in the starlight. "For hundreds of years."

They stared at him, completely perplexed by the emotion of horror that seemed to have overwhelmed him.

"Listen," he said after a moment. "If my guess is right, we won't have to fight these Cubies to get Ezra and Joan away. I want you to refrain from making a single hostile move toward them when we go out there. Let me talk to them."

"Talk to them?" echoed Otho incredulously. "But they won't understand you. They're only queer, clever little animals."

"Maybe they will understand me," Captain Future muttered. "Though I almost hope they don't."

Completely without understanding, the four followed him out of the jungle as he stepped straight into the starlight of the open clearing.

Instantly they were glimpsed by the Cubics. At once the noisy crushing and carrying of ore was broken off, and the creatures came gliding toward the five newcomers.

They approached menacingly, in the form of huge, semi-manlike figures with upraised, threatening arms. Curt Newton waited until they were quite near, and then he spoke loudly to them. He used a queer language.

The Cubics stopped short! They froze where they were, every eye of the grotesque little cubical creatures staring at Captain Future.

"What's he saying?" murmured Kim Ivan wonderingly.

"He's talking to them in the Antanan tongue!" Otho said dumbfoundedly. "I don't get it."

BUT Captain Future's speech seemed to be having a paralyzing effect upon the Cubics. Curt was saying to them, in the Antanan language:

"We come from the home world, from Antares."

He waited. Had his appalling guess been right? It seemed that it had, for the Cubics were now betraying the wildest excitement.

The creatures had not the intelligence or memory to understand the meaning of his words. Curt divined. But the language in which he spoke was striking some deep, tuned chord of memory in their queer minds.

For the creatures had broken up their menacing formations and were rushing forward and swarming around Curt in a swarm of swirling cubical bodies. Then little eyes were fixed upon his face, and from their tiny mouths came little, piping sounds indicative of immense excitement.

Captain Future advanced toward the little city, with Otho and the others amazedly following. The Cubics continued to swarm around Curt eagerly. All work had ceased, and every Cubic was gathering.

Joan and Ezra saw them coming. Relief and astonishment were both in the girl's face as she greeted Captain Future.

"Curt, how did you win over the Cubics? They took us prisoner and they've been holding us here."

"Joan, you and Ezra speak to the Cubics," he ordered. "Say a few words to them in Antanan. You know I taught you a few phrases of it."

Wonderingly, the old marshal and the girl agent obeyed. No sooner had the words left their lips,

than the attitude of their captors changed. The Cubics who had been guarding them now clamored pipingly around them as well as around Captain Future.

"What in the name of the Sun does it mean?" Ezra Gurney exclaimed. "How come just hearin' Antanan spoken has such an effect on these critters?"

Curt answered solemnly. "Because these Cubics are Antanans. At least, they're the remote descendants of human Antanans."

It was too staggering a statement for the others to take in immediately. They looked incomprehendingly at the weird little creatures swarming by the hundreds around them — the tiny cubical bodies, the queer, clawlike little limbs, the twinkling eyes and piping mouths.

"These critters human once?" gasped Ezra. "you must be joking!"

Joan paled. That honor which had so shaken Curt Newton was invading her mind as she began to realize what he meant.

"Oh, Curt, *no*! You can't mean that the human Antanans who once colonized Astafall, who left that inscribed tablet, changed into --"

"Into these Cubics, yes," Curt finished soberly. "We wondered what had become of those human colonists. Well, here they are."

A stunned silence held his companions, while the unearthly little creatures continued their mad dance of excitement about them.

"Every species of life upon this worldlet suffered tremendous evolutionary development when Astafall passed long ago through that region of cosmic radiation," Curt continued. "But evolution can work in a downward direction as well as an upward one. Some of the species on this world evolved upward, notably its plant-life. But others, like its human species, were subjected to a progressive degeneration by the mutational changes."

"The Antanans here mutated gradually into unhuman form. We know from that inscription that it was so. They mutated into a form in which they had lost the intelligence and memory that had been theirs. Then former telepathic method of communication developed prodigiously, to compensate for the diminishing of their size and strength. By necessity, they developed an uncanny ability for physical and mental cooperation. That ability is all that has even kept them surviving,

when intelligence and size and strength were gradually lost."

HORROR was on the face of every one of Captain Future's companions, now. The little Cubics were no longer comic, but tragic.

These tiny, semi-intelligent creatures -- the descendants of men! The ghostliness of it shook them all.

"But why have they kept mining metals, all these centuries?" cried Kim I van. "They no longer have the intelligence to use it."

"Racial memory," Curt answered somberly, "persists in a species long after intelligence is lost. In these Cubics has persisted the tradition of their human ancestors who upon this world mined metal which the ships of Antares came to get."

"Good God!" whispered George McClinton horrifiedly. "All these e-e-centuries, the e-creatures have been faithfully m-m-massing ores because of that tradition."

Captain Future nodded. "That's why I spoke to them in the Antarian tongue. I hoped it would strike a chord of racial memory. And it has. They have a dim idea that we are those who have come for their captured metal."

Tears glistened in Joan's eyes. There was something terribly poignant about the excited happiness of the simple little creatures swarming around them.

The Cubics eagerly led Curt and his companions toward the giant ore-heaps behind their community. There was a quality of pride in their excited, meaningless piping.

"There's almost all the metal here that we'll need for our ship," Curt said after a quick examination of the great heaps. "Everything except calcium."

"Blast it, why is it we can find everything on this world except the few pounds of calcium that are the most vital of all?" Otho muttered.

"Say, this will save us the work of mining ores, if the Cubics will let us have what we need of these metal piles," Gag declared.

Captain Future nodded. "And we need to save all the time we can, for we're far behind schedule on the ship. I'm sure they'll let us have it."

He stepped forward, and gathered up an armful of sample chunks from the great pile of beryllium ores. Instantly, as though comprehending his purpose, the Cubics rushed forward toward that pile.

The creatures swiftly formed themselves into several dozen of the big centipedal figures whose formation they took for carrying purposes. Other Cubics became octopod figures who rapidly loaded the centipedal ones with masses of the beryllium ore. They they stood, eyeing Curt expectantly.

"They're going to carry the stuff wherever we want it," Captain Future guessed. "Poor devils -- they have some dim traditional notion that we've come in ships to this world to get it."

He and Joan and the others started back through the jungle, in the direction of the camp. Quickly the Cubics carrying the masses of ore swung into the jungle behind them and followed them along the path.

IT WAS a weird procession through the dark fern-forest, the eager piping of the Cubics sounding incessantly as they followed the humans.

But when they were still a few miles from the camp, the attitude of the Cubics changed. They began to move more slowly, to show an extreme reluctance toward going farther in this direction. Finally they stopped altogether, putting down their loads and clustering with dismayed pipings around Captain Future.

"They won't go any farther!" said Otho surprisedly. "I wonder what they're afraid of?"

"I believe," Curt said thoughtfully, "that they know of something dangerous in the area in which our camp is located. That would explain why the Cubics have never come close to the camp."

"The Dwellers!" cried Kim I van. "Future, they're scared of the Dwellers!"

"Say, that's right," Gag rumbled. "We thought the Cubics might be the Dwellers, but we know now they're not. Who are the Dwellers, then?"

"They're somewhere in the area around our camp, whoever they are," Curt Newton murmured. "If the Cubics could only tell us."

He tried to get into intelligent communication with the little creatures. But it was impossible. Their only method of communication was the weird sixth-sense of cooperation by which they interlocked their own minds and bodies. Their piping sounds were utterly without meaning.

The only definite thing that could be gathered from the actions of the Cubics was that the area around the castaways' camp held danger, and that the creatures would not enter it. And the creatures set up a distressed piping when Curt and his

comrades finally strode on and left them.

"We can have our own men come this far and sledge that metal ore to camp," Curt planned as they went on. "And the Cubics will let us have all the other ores we need from those great heaps. I'll save precious time!"

Joan looked at him soberly. "When Astarfall is destroyed, those little creatures will all perish?"

"Yes," said Captain Future heavily. "There's no possible way in which they could be saved. And would you *want* to keep alive those pitiful descendants of a once-human race?"

CHAPTER XVI

Die Awakening



UPON the next morning, Curt's improvised organization began the work of casting the scores of great beams that would form the frame of the ship.

The atomic smelters throbbed and hummed, the molten alloy hissed into the cement molds, the shining beams were later broken free of the molds and the same routine was

immediately repeated.

During the next days, a mass of numbered beams and struts rapidly accumulated near the towering, giant crabs at the center of the camp. Grog and McClinton operated the smelters under Curt Newton's direction, while Otho, Kam Ivan and most of the nutneers hauled the loads of ore to camp.

The Brain still ranged out over the surface of Astarfall in vain search of calcium. So far, they had not found a grain of the vital catalyst. And so far, the Brain had not been able to translate the gaps in the ancient inscription, which might have given them a clue to the identity of the Dwellers.

"The Dwellers are somewhere within a few miles of our camp," Curt reasoned. "We know that from the actions of the Cubics. But what and where are they? We've seen no creatures of high intelligence in all this area."

"It's possible, I suppose," murmured the Brain,

"that that fellow Beaboll's suggestion had truth in it, and that the Dwellers are subterranean or invisible creatures. Rollinger's ravings indicate they're somewhere near."

Captain Future shook his head wearily. "It's a hideous riddle. And two more men disappeared last night, despite our new system of guards."

Curt had instituted a regime of guards designed to halt the disappearances. It was evident that the Dwellers only made their hypnotic attacks upon sleeping men.

So Captain Future had posted guards over all the sleepers, each night. He had instructed them, "If you see any man get up and start sleep-walking, it means he's in the hypnotic grip of the Dwellers. But don't awaken him. Follow him."

"Follow him?" the others had said startledly. "But the Dwellers will draw him right to them!"

Curt nodded. "Which means that by following this victim, you'll be led right to the Dwellers themselves. At last we'll find out what they are and where they lurk, and can take measures against them."

But here, again, the unearthly cunning of the mystery Dwellers showed itself. So long as Curt's guards remained wakeful and watching the sleeping men, not one hypnotic attack was made upon them.

It was obvious that the Dwellers were *aware* of the watchers, and were too crafty to give themselves away by drawing victims to themselves while anyone was watching.

"Anyway, it seems to have stopped the attacks and that's something," Captain Future said. "We need every man, now!"

For as these short days passed, the stark necessity of accelerating construction of the ship was terribly evident. Time was flying -- and each day meant Astarfall was nearer to the System and to destruction.

Curt Newton soon began fitting the growing pile of beams into the framework of the ship. The stout metal girders, the curved ribs, were attached solidly to the massive keel by means of their atomic welders. The torpedo-shaped framework of the vessel took definite form.

"Let's call it the *Phoenix*," Joan suggested. "In a way, it's rising out of the ashes of the old *Falcon*."

"We'll start tomorrow casting plates, and making the refractory alloy for the rocket-tubes," Captain Future said haggardly. "We've got to go faster than we have."

THAT night two men disappeared from camp. The Dwellers had stuck again. Curt's alarm-signal around the stockade had failed. And his guards had failed, for they admitted they had slept.

Curt had not the heart to blame them, for the men were all now rearing exhaustion. Yet their sleep had cost two lives, and had increased the terror of the Dwellers. Rollinger's shrieking was now incessant.

"I'll watch tonight myself," Captain Future declared.

All that day he sweated at the labor of producing the plates which would be welded onto the torpedo-like framework of the *Phoenix*. But he insisted on keeping his watch that night.

"You're too exhausted yourself," Joan pleaded. "Gag or Simon --"

"Gag is at the Cubes' city with the party transporting ore, and Simon is searching night and day for calcium," he answered. "I'll be all right."

But for once, Captain Future had overestimated his iron strength. Fagged by the superaluminum strain under which he had been laboring, he fell asleep before midnight as he sat listening to John Rollinger's babbling.

In his sleep, he dreamed. He dreamed that out of depths of swirling darkness, a cold, vast, unseeable intelligence was approaching him.

He felt the icy grip of it upon his dazed mind. And deep within Curt's subconscious, an instinct shouted frantic warning.

"The Dwellers -- they're seizing you!"

He *knew* in his subconscious that that was what was happening. But he could not wake, he could not struggle. The tremendous power of the hypnotic grip upon his slumbering mind and body was now complete.

Curt dimly felt himself rising and moving forward. That helpless, unconquered corner of his mind told him that he was being drawn as a hypnotized victim toward the Dwellers. But still he could not wake nor do anything to break the hold of those vast, icy intelligences upon him.

There came a sudden violent shock! Curt suddenly found himself lying on the ground, *awake*.

He staggered to his feet. He had fallen to the ground near the pile of metal struts beyond which towered the giant cacti. And the ground was

rocking and rolling violently under him like the waves of a sea.

"My God!" choked Curt Newton. "The Dwellers had me, but a sudden ground-quake knocked me awake and saved me."

The quake was not subsiding. It was growing every minute more violent, and everyone in the camp was awakening in wild terror.

They were all flung off their feet, onto the ground that rolled sickeningly under them with a dull, tremendous roar of diastrophism. The pile of metal struts collapsed with a clatter. Cries of terror arose.

"Keep your heads!" Captain Future shouted. "It's another quake."

"Look!" screamed Bonabell, pointing wildly to the east.

The sky there was blazing with fire. Up from the distant volcanoes were shooting huge geysers of flaming lava that painted the heavens crimson.

Vast clouds of steam and smoke and ashes whirled up to veil that titanic eruption. The air was thick with sulphurous fumes, and hot ashes rattled down upon them as the ground quivered ever more wildly beneath them.

"The end of this world has come already!" hoarsely yelled a terror-stricken mutineer.

THE darkness became Stygian as vast clouds of smoke from the erupting volcanoes filled the air. Winds were shrieking like fiends, and the sickening heave and fall of the solid ground beneath them continued.

Choking and gasping as he breathed the superheated, sulphurous fumes, Curt Newton struggled to the side of Joan.

"Lie down!" he yelled to her over the tumult. "This will soon pass."

Gag's tremendous voice shouted through the infernal uproar. "Chief, the ship's framework is going to break loose!"

A new and appalling sound had entered the symphony of destruction. It was the heavy rumbling and thumping of a great mass rocking on the ground.

The heavy metal framework of the *Phoenix* was rocking wildly in its rough cradle as the quakes continued. It threatened to roll free entirely, to roll down the knoll and crush out then camp and themselves.

"Get away!" shrieked a scared mutineer. "She'll

come loose on us any minute!"

"No!" blazed Captain Futue's voice. "We've got to pin her down! Grog, get the sledges and some of the smaller beams for stakes! Otho, grab those sledge-cables and bring them!"

Not even the terrifying nature of their situation could temper the instant loyalty and obedience of the Futuremen. They sprang to obey.

And Curt found bug Kam Ivan beside him as he ran to help Otho unfasten the tough, strong cables by which they had drawn the ore-sledges.

"If she goes when we're beside her, we'll never see the Moon again!" gasped Otho as they ran toward the ship with the cables.

Clang! Clang! Grog towered like an incredible metal giant in the storm, using the heaviest of the sledges to drive small, straight metal beams deep into the ground beside the *Phoenix*.

The torpedo-shaped framework, upon which they had expended such tremendous toil and thought, was leaning toward them threateningly with each new heave of the quake. If it broke loose, it would smash itself and them, too.

Curt and Otho fumbled furiously in the darkness to tie their cables to the stakes and then to the lower beams of the frame. Kam Ivan had found a sledge and was helping Grog drive more stakes, while George McClinton had groped his way to them to help.

"Tighten those cables! Put two more on each side!" Curt shouted.

The framework was securely lashed down to the stakes. Now the tremors seemed subsiding a little. But now the buffeting winds were rising to a gale of hurricane force.

For two hours, they all lay flat upon the ground while the raging gale swept over them. By the end of that time, the quakes had ceased except for an occasional quiver. The disastrous roar of shifting rock beneath had stopped, and the eruption of the volcanoes seemed lessening.

DAWN came as the gale died down. The feeble, murky light disclosed a scene of destruction in their camp. The grimed, haggard castaways surveyed it in mute dismay.

The framework of the *Phoenix* was undamaged, except for a bent beam which could soon be straightened. The huge barrel-like cox's still towered unharmed at the high central point of the clearing. But nearly everything else was wrecked.

Most of the stockade was down, all the huts but one had collapsed, and their cyclotrons, tools and supplies were covered with debris.

Captain Futue discovered that none of them had been seriously injured, though there were many bruises and minor hurts.

"By the Sun, I never thought I'd see another day," declared Kam Ivan feelingly. "I sure thought the cursed planetoid was cracking up."

"This is a warning," Curt told them urgently. "We can expect more and heavier cataclysms as Astarfall draws nearer the System. This unstable little world is starting to respond to the gravitational perturbations that in a couple of weeks will shatter it completely."

"Can we finish the *Phoenix* in time?" Joan asked breathlessly.

"We've got to," Curt said tightly. "And we've got to find the calcium which will enable us to operate it."

He detailed a small number of the men to clear up the battered camp. The rest he drove throughout the day with unrelenting energy.

Grog and George McClinton slaughtered the few bent beams of the ship-frame, by softening the metal with atomic welders and exerting pressure upon it with improvised jacks. Meanwhile, Captain Futue and Otho supervised the ceaseless operation of the big smelters.

They toiled all through that day casting the big beryllium alloy plates for the hull. The work parties of the mutineers brought constant new loads of ore upon their makeshift sledges. There was a quality of scared desperation in the way the convicts worked that day. They had been thoroughly impressed by the catastrophic outbreak of the night.

The Brain, returning that evening from his ceaseless search for calcium, reported that the whole volcanic area was in violent activity.

"New craters have broken out in the eastern section, and the Canyon of Chaos has partly collapsed on itself and is now a large lake of lava," he stated.

Curt nodded grimly. "The increasing shocks are allowing the radioactive hellfire at Astarfall's core to gush to the surface. It'll get rapidly worse. But what about the calcium?"

"Curtis, I haven't seen a sign of the element," Simon Wright confessed. "It and certain related elements like potassium and scandium just do not seem to exist upon this world."

"If we can only find a few pounds of the stuff, it'll be enough," Captain Future sweated. "Even a pound or so would at least allow us to use the eyes long enough to take off."

That night Grog stood watch over the camp. But since the tireless robot could not alone keep watch over all the sleepers, young Rih Quib shared his guard.

But the next morning Rih Quib himself was missing. It was tragically obvious that the Mercurian officer had fallen asleep and had been seized hypnotically by the Dwellers.

Ezra Guney raged. "I liked that, boy a lot! If ever I find out who the cursed Dwellers are, I'll — Cap'n Future, maybe them devilish tangle-trees are the Dwellers? Maybe they're intelligent."

CURT shook his head haggardly. "No, they can't be the Dwellers. I admit that plant-life on this world seems to have evolved further than on any planet I've ever visited. But the Cubes, who know more than we do, show no fear of tangle-trees. It is this region that they dread and refuse to approach."

The other castaways were less stricken by the new disappearance than Curt had expected. Their fear of the Dwellers was still great, but even greater now was their terror of the coming cataclysm.

Through the next days, Captain Future drove the work around the clock. Then last two weeks were slipping rapidly away. And the ominously increasing volcanic activity and recurrent tremors showed that the final catastrophe was near.

They welded the big plates onto the framework of the *Phoenix*, joining each plate to the next with the atomic welder to form an airtight joint. Presently, the inner hull of the torpedo-like ship was all on. But they still must build on the outer hull.

Captain Future put that work into the hands of Grog and Otho, who trained the ruminants and divided them into gangs that worked in successive shifts. Curt himself, with McClinton and Kim Ivan, toiled to melt sand and minerals into glassate for the portholes and bridge-windows, to cast the mercurian rocket-tubes, and to fashion tight tanks for water and oxygen.

Kim Ivan, mopping sweat from his brow and staggering from sixteen hours of unrelenting labor, found one consolation.

"The only good thing about it is that now we're

working day and night both, the cursed Dwellers have let us alone," panted the Martian.

Curt nodded exhaustedly. "Tomorrow we'll install the cyclotrons in the ship, and fit the rocket-tubes."

"And then we'll be able to leave this cursed planetoid!" exclaimed Moremos forcibly.

"Not until we find calcium," warned Captain Future.

The venomous Venusian's dark eyes narrowed. "What do you mean — till we find calcium? I'm no engineer, but I've rocketed enough to know that a ship's eyes run on copper fuel, and we've plenty of copper. In this emergency, we can take off without that catalyst you talk about, surely."

"You're a f-f-fool, Moremos," said George McClinton emphatically. "Without the calcium catalyst, the released energy of c-copper would blow us sky-high."

CHAPTER XVII

Disaster



THAT night came a frightening series of slump shocks, like tremendous gunnings underground. The *Phoenix* rocked in its cradle, and great jets of fire shot fire into the heavens from the neighboring volcanoes, filling them with brilliance.

Joan Randall had incredible news for Curt when he awakened after that night of fear.

"John Rollinger has recovered his sanity!" she exclaimed. "I think the shocks last night somehow did it. He's asking for you."

Curt went with her to the physician, who all these days had been confined a babbling madman in one of the huts. Rollinger's spare face looked dazed but sane as he stared up at Curt.

"Captain Future, they've told me what's happened," the physician said honestly. "I can't seem to remember anything. Yet I'm clear enough in my mind now."

"Take it easy, Rollinger," Curt advised. "You've

had a wonderful recovery, but you'll relapse if you undergo any strain now. I'll talk to you later."

At regular intervals throughout that day came the onanous thunder-groanings from beneath round. There was something terrifying about their regularity. Yet the volcanoes seemed unusually quiet, not even smoke rising from them.

Thoroughly frightened by these new developments, the castaways worked furiously all through the day under Captain Future's direction. They hauled the six massive cyclotrons into the *Phoenix*, and bolted them fast. The fuel-feed and power-lead pipes were installed, the heavy rocket-tubes were screwed into place, the hermetically tight space-door was hung.

By sunset the men were dropping in their tracks. The periodic sharp shocks had completely ceased two hours before. A dead, heavy hush reigned, and the air seemed thick and oppressive. Curt Newton's worn brown face was dripping with perspiration as he and McClinton and Otho staggered almost drunkenly out of the ship.

"Now -- the calcium," Curt panted. "We've less than five days in which to find it, or perish."

McClinton's face was hopeless. "The Bram has h-b-lunted all these weeks without finding a g-g-gum."

A wild yell interrupted them. It came from back inside the *Phoenix* and was in Boraboll's voice.

"Rollinger is wrecking the ship!"

Curt lunged back into the vessel. John Rollinger towered in its eye-room, his face flaming as he battered with a heavy bar at the eyes.

"Get him!" Curt yelled, plunging forward himself.

The whirling bar sheared toward him in a blow meant to shatter his skull. He ducked under it and tackled Rollinger.

The crazed scientist seemed to have the strength of ten men, and Curt's weary muscles could not hold him. But Gag and the others were rushing forward. In a few moments, Rollinger was bound.

Joan came running in to them, her face deathly white and a big bruise on her forehead.

"It's my fault!" she sobbed. "He seemed so sane all day, that finally I untied his bonds as he asked. Then he struck me down and ran toward the ship."

Rollinger was looking up at them with an expression of hatred and contempt upon his face. Then, abruptly, his face changed before their gaze.

It distorted into what it had been before, the face

of a madman. A stream of insane babblings fell from his lips.

"They took my body!" whimpered the madman. "They guessed that you mean to escape from here--" He tailed off in unintelligible moulting.

"The Dwellers!" swore Otho. "They've always had a grip on Rollinger's shattered mind. And because they don't want their victims to leave here, they used him today to try to wreck the ship."

"Good God, what kind of creatures are they that can use such diabolical methods of attack?" cried Boraboll, shaking wildly.

"Take Rollinger back to his hut," Curt ordered. "He didn't have time to do any real damage. Though, in a few minutes more--"

The words were swept from his lips by a tremendous, booming sound that broke the heavy hush. The ship quavered suddenly in its cradle.

A SHRILL yell from Ezra brought them tumbling out into the open. The ground was shuddering like a harp-string. The booming was increasing in volume and rapidly by the second.

"The volcanoes are going to blow!" Curt shouted. "Everybody get--"

For a second time he was interrupted. And this time the interruption was an explosive detonation of such titanic magnitude as to stun them.

They glimpsed the crests of the distant volcanic range hurtling into the sky in great masses of rock and lava. The whole top of the range had blown off. Fiery lava raved up in spouting geysers, then was hdden by a tremendous wave of dark, smoky gases that puffed outward gigantically.

"Into the ship!" Curt cried. "That burst of fumes will asphyxiate us all if it catches us!"

They tumbled back into the ship, Gag dragging the raving Rollinger in with them. Otho slammed shut the heavy door.

It was not a moment too soon. The wave of poisonous fumes rolled over the camp a minute later. Everything outside was blotted from sight by the swirling gases.

Then the fumes began to thin. The *Phoenix* was still shuddering in its cradle. When the titanic burst of gases had been swept away, they staggered out of the vessel.

They stood, appalled by what they saw. Innumerable colossal fountains of lava were pouring up from the shattered craters and chasms of

the neighboring volcanic area. And already a ten-foot crest of the flaming molten rock was rolling toward the jungle and then camp.

"That lava will wipe out everything here!" Morenos shouted. "Our only chance is to take off in the ship at once."

"No!" Captain Future cried. "I tell you, we *can't* take off without calcium."

"I don't believe you!" flamed the Verusian. "You're only stalling so that you and your friends can slip away in the ship and leave the rest of us here."

"It's better to risk starting without the calcium than to stay here and be killed by the lava!" howled Boraboll.

"Listen to me!" Curt Newton's voice rang out. "That lava may rollover the jungle but it won't touch us yet, for our camp is built on this knoll. The lava may surround the knoll, but won't be high enough to cover it. There's still a chance to find the calcium. The Brain can still come and go even though the lava surrounds us. You've got to trust in me."

"Tua with you, Future," said Kim Ivan promptly. "I think we're sunk, but we gave you a promise and we'll play it out to the end."

"Then get you men to work hauling everything up here to the highest part of the knoll!" Cut exclaimed. "Put the ores, tools, food supplies, everything up here between the ship and those cack. Otho, you and Ezra come with me and we'll see whether the lava can be deflected in any way."

Ezra Gurney and the android, as well as McClinton, raced beside Captain Future through the jungle toward the oncoming flaming tide.

Curt's eyes desperately studied the topography of the ground as they advanced. He was hoping that some fleek of the surface might enable them to build a temporary dam or wall to shunt the lava away from the knoll.

His hope died within him as they came closer to the advancing tide. The crimson-glowing wave was higher than a man, rolling forward with majestic slowness, hissing and crackling as it ate the jungle before it.

"Holy sun-mps, nothing can deflect *that*!" cried Otho.

CRASH! The hollow sound of the explosion came from the camp behind them.

"That s-sounded like eyes exploding!" cried

McClinton.

Curt whirled. "Good God, if those fools --"

He didn't finish. He was already racing back toward the knoll. As he ran up its low slope, Kim Ivan and Joan and others came stumbling frantically to meet him.

"The ship?" cried Captain Future. "Did Morenos --"

"Yes, he did!" raged Kim Ivan. The big Martian was mad with wild anger. "When we others were hauling the stuff up out of danger, Morenos and Boraboll and a dozen other fools like them tried to take off in the *Phoenix*."

Curt and the others came into sight of the ship. An icy feeling of utter despair clutched at his heart as he saw

The cyclotrons had exploded when copper fuel was released into atomic power without the inhibitory calcium catalyst to control the violent energy. The explosion had rent a great hole in the stern of the ship.

The battered bodies of Morenos and Boraboll and others who had been with them in the eye-room had been blown out of the gaping hole in the hull. Other stunned nutineers were staggering dazedly beside it.

Ezra Gurney's voice was calm in despair. "So this is the end. Well, we made a good try, didn't we?"

Through murky veils of smoke and steam the rising Sun looked down upon a world in dreadful travail. The whole surface of Asturfall was shuddering uneasily as the little planetoid felt the increasing gravitational grip of the planetary system toward which it was rushing. The volcanic area was now a hell's-caldron of geysering lava, from which an angry red tide had crept out like an oncoming blot over the jungle for miles.

Only the rounded knoll still, rose above the hissing lava flood which completely surrounded it. Upon this clean knoll towered the stark, barrel-shaped forms of a score of grotesque, gigaotic cack. And near those monstrous growths bulked the metallic torpedo shape of the space ship around which less than fifty men were frantically laboring.

"We've got the first two eyes repaired," Crag reported to Captain Future as the red-headed planeteer came out of the ship. "How about the hull?"

"The inner hull is patched. We're still working on the outer one," Curt Newton panted.

He swayed a little from exhaustion as he stood, passing his hand wearily across his bloodshot eyes.

For two days and nights of terror, Captain Future had driven the survivors in this last burst of seemingly hopeless activity. It was he who had fought against the utter despair which had possessed them after the ill-starred attempt of Morenos and the others had crippled the *Phoenix*.

"Are you going to stand here and fold your hands and wait to die?" Curt had lashed them. "Or are you going to keep fighting?"

"What's the use, Future," said Kim Ivan hollowly. "The eyes are wrecked, and the hull torn open. And we've got only a few days left."

"We can repair those eyes and the hull if we hurry," Curt had insisted. "The lava won't come up over this knoll for awhile."

"Even if we do," Ezra muttered fatalistically, "we still can't get away without calcium. Look what happened when Morenos and the rest of them tried it."

"There's still a chance that Simon will find calcium," Curt said. "A chance for life. Are you going to take it?"

THEY looked at him, most of them, with faces sick with hopeless discouragement.

The Brain has been looking for calcium all these weeks without finding it," said one mutineer. "He can't find it now in a couple of days."

"He may," Curt stated, his face tightening. "And if he doesn't, we'll still get away. For I promise you that in that case, I will get the calcium."

They stared.

"Curt, you can't be serious," protested Joan. "If the Brain can't find calcium on this world, where would you get it?"

"I'll get it," Captain Future replied firmly. "I gave you my solemn word that I will. And I never broke a promise in my life."

A faint gleam of hope shined upon the faces of the stricken castaways. There was no ground for hope except their belief in Curt's promise. Yet they clutched at this straw.

"We'll have to bring the eyes out of the ship and repair them cracked jackets," Captain Future was continuing rapidly. "Also, there'll be the job of repairing that hole in the hull, and the wrecked power and fuel-pipes. Every minute counts, from now on! To work!"

His indomitable resolution sparked the whole

frenzied effort that followed. Every pair of hands was needed now. Joan helped with the others, dragging masses of ore toward the smelters to be used in repairing the eyes.

The fearful disturbances were not dying down. Instead, they were becoming worse. Tremendous thunder of deep catastrophism continually shook the ground under their feet. Strangling fumes drifted over them, and then were torn away by the howling winds.

The hissing lava flood was crawling toward them from the east. They could hear the ominous crackling and snapping as it rolled over the jungle and lapped around the slopes of their knoll. It soon completely surrounded the knoll. They were now trapped here. The space ship was their only possible way of escape!

That did not apply to the Brain. Simon Wright could still fly out over the lava flood, and he did so again and again in his quest.

"Lad, I've been almost everywhere on this world," he reported to Curt that evening. "It's always the same. No calcium!"

Curt's face was dripping, his red hair disordered, his zipper-suit torn and soiled. He had been working on getting out the cyclotrons.

"Keep at it, Simon," he urged faintly. "We don't need much calcium, remember. A few pounds would be enough. Even a pound to use as catalyst in one cyclotron would be at least enough to get the ship off Astafill."

The Brain looked at him closely. "If I don't find any, have you really a plan for getting calcium or was that promise of yours just a story to encourage the others?"

"I have a way of getting a little calcium, enough to allow a take-off," Captain Future replied. "But I only want to use that way if everything else fails."

The Brain seemed startled, but Curt did not elucidate. He had already strode back to the work with the eyes.

That night was a fearsome one. They had plenty of light by which to work, for the surrounding, glowing lava cast a lurid red glare. By that terrible illumination they toiled at the task of repairing the wrecked eyes.

Before midnight a terrific electric storm raged across the doomed planeted. Blue lightning danced and flashed incessantly, and the howling hubbub of thunder drowned the more ominous sound of seismic tremblings. Hot, hissing rain slashed down,

battering the half-blinded men

Throughout the next day, the seething lava crept slowly up the sides of the knoll. Curt and his toiling men scarcely glanced at that molting, threatening tide. They were becoming numb to danger.

Late that afternoon, came two violent quakes. The *Phoenix* shifted dangerously in its cradle. And the big atomic smelters were overturned, spilling molten metal that almost engulfed Curt and Grog standing nearby.

"Get those smelters back up!" Captain Future shouted. "Move them into that little hollow near the cack. They'll be better braced there."

"This is a n-n-nightmare," George McClinton stammered as he stammered at the job with them. "We'll w-w- wake up back in the V-Vulcan."

Over the din came the incessant, crazy shrieking of John Rollinger. "Masters, spare us! Do not slay us!"

"He seems to think the Dwellers are causing all this," Ezra Gimney said. "He's been praying to them all day."

They got the smelters upright in the little hollow near the towering cack and soon had them in operation again. But their molds had been cracked by the quakes and had to be repaired before they could go on with the work of casting new jackets for the wrecked cyclotrons.

Men dropped and lay unconscious, during the fearful hours of that night of labor. Joan, staggering herself from weakness and strain, worked to revive them.

CHAPTER XVIII

Supreme Sacrifice



KIM IVAN was a tower of strength. The big Martian brute, his battered face grimed and terrible, his eyes a little wild, drove the halting mutineers on whenever they showed signs of halting work.

"We may be outlaws and pirates, but we're fighters. Aren't we?" roared the Martian, to them. "Thus is

the biggest fight we ever had. Nobody is going to quit. This'll be no more traitors like Moremos. We shall work and survive together — or we shall die together!"

They got the new jackets onto the eyes with fumbling hands. By morning they had moved the eyes back into the *Phoenix* and re-installed them.

While McClinton superintended this, Curt and others welded atomic welders to repair the rent in the hull. Curt had not slept for forty-eight hours. He was staggering when Joan came to him with food.

"The job's almost done," he said thickly. "McClinton's hooking up the fuel-pipes now. Has Simon come back?"

The Brian had been gone all through the previous day and the night.

"Not yet," Joan answered. "Oh, Curt, maybe he's been caught by one of the quakes when he was exploring for calcium."

"He'll be back," Captain Future husked with unshakable confidence. "Maybe his staying so long means that he has found calcium."

There was suddenly a low moaning sound in the air. Winds and streamers of smoke whirled fidgetingly from a dozen different directions. They felt a curious lightness on their feet, as though they were sinking.

"Another quake!" Curt yelled warning. "Down, everybody!"

They flattened themselves upon the ground just as the shock hit. The ground seemed to rise and sink beneath them with inconceivable rapidity, like an elevator alternately ascending and descending.

A busting, prolonged roar hit them ears. The *Phoenix* bounced up and down in its cradle, threatening to smash its keel by its own weight.

"Gods of Mars, look at that!" yelled Kim Ivan.

Out there in the haze, miles away, whole new fiery mountains were rising majestically into being. The tortured throes of doomed Astarfall were bucking up its crust.

Tremendous explosions of steam veiled the distant spectacle of planetary chaos. A new, higher wave of lava came lashing across the smouldering crimson sea that surrounded the knoll. It splashed higher against the sides of their elevation, breaking in fiery spray.

Choking from the fumes as he stumbled to his feet, Curt Newton saw vaguely that John Rollinger had escaped from his hut. The madman, his bonds apparently snapped by that last shock, was praying

frenziedly upon his knees

"Masters, do not slay us! Spare us!" he was praying intently to the Dwellers

CAPTAIN FUTURE, his beam rocking in this hour of planetary doom, disregarded the madman. "He had glimpsed a wavering shape flying down through the smoke and steam

"It's Simon!" he shouted. "He's come back!"

Buffeted about by the howling currents of hot air, the Brain's glittering, transparent cube struggled down toward them

"The calcium?" cried Ezra Gurney to him

"I could not find any," said the Brain. He spoke as though with a great effort, his metallic voice hesitating and jerky. "There is no calcium."

"Masters! Masters!" came Rollinger's wild, insane shriek of imploration in the stunned silence that followed Simon's fateful news

And Curt Newton suddenly noticed that, as he prayed, Rollinger was kneeling in front of the big clump of gigantic, barrel-shaped cacti

Blinding revelation crashed into Captain Future's brain. The veil was abruptly torn from the sinister mystery of the planetoid

"Good God!" he choked. "The Dwellers! I've found them out, at last!" The others looked at him, obviously believing that the superhuman strain had unseated his reason

Curt ran forward to the nearest of the giant cacti in front of which the madman was kneeling. He laid his hand shakingly upon the fluted, spineless side of that mighty growth which towered high above him

"We've been blind," he choked. "We knew that plant life had been tremendously developed by the burst of evolution through which Astarfall passed. We knew that the tangle-trees and other plants had developed the power to prey upon and ingest living creatures. We should have known that plant intelligence would have been developed too by that evolutionary spurt!"

A look of awe came on their faces

"What do you mean?" Kim Ivan asked harshly.

"I mean that one species of the mutating plants of this world developed intelligence to the point where it could use hypnotic mental power to draw its victims to it!" Captain Future cried. "I mean that these giant cacti are the Dwellers!"

"Curt, look out!" screamed Joan.

An opening had suddenly appeared in the fluted

side of the gigantic cactus-creature beside Curt Newton. It was like a perpendicular, slitted mouth that suddenly yawned in the elastic fiber body of the thing

Curt, off balance, was falling in toward the hideous, yawning maw. By a superb effort, the Brain flashed through the air and thrust Captain Future aside. He fell sprawling a little beyond the plant-monster

The gaping slit-maw in the side of the great growth instantly closed

"Name of the Sun!" Ezra Gurney cried wildly. "All our men that disappeared — those things drew them to themselves and swallowed them!"

"And all this time we've been hunting the Dwellers, they've been right here in our own camp!" Kim Ivan was saying dazedly.

Curt snatched up one of the heavy bush-knives. "Come on and help me!" he panted. "We're going to cut that creature open."

"Curt, there's no time for mere revenge on the Dwellers," pleaded the Brain

"This is not just revenge," Captain Future flashed. "These plant-creatures are intelligent. If there's any calcium on this planetoid, they'll know of it. And we'll make this one tell where it is."

THEY snatched up the heavy bush-knives and attacked the cactus-monster's mighty base. As they started slashing into the tough fiber, the hideous maw of the thing opened and closed in vain effort to snatch them

"Don't!" screamed Rollinger. "You are hurting the Master. They will destroy us all!"

Captain Future suddenly reeled as into his brain came the impact of a raging telepathic attack. A furious thought-order to desist.

The others felt that mental resistance of the Dweller, too. Kim Ivan cried out:

"The thing's fighting back telepathically! This is like a crazy dream."

"Keep at it!" pressed Curt. "We know the Dwellers can't dominate us hypnotically when our conscious minds are awake. It can't stop us!"

The ground under them was shuddering violently from new quakes, as they fiercely slashed deeper into the base of the monstrous growth

Ten feet in diameter was the massive thing, its outer skin of elastic plant-fiber shielding softer plant-tissues of pale white. Severed capillaries bled sticky sap in horrible imitation of a wounded

animal as they cut deeper.

The hypnotic resistance of the Dweller was finite, and their minds seemed clouded and chaotic. Yet it could not overcome them. They slashed even deeper -- and the whole towering, barrel-like mass of the creature was finally cut through and toppled aside.

Curt Newton slashed carefully down through the white fibrous tissues of the creature's base, until he uncovered that which he sought.

"God, it's the thing's *brain!*" choked Ezra Gurney.

Deep within the base of the giant plant-creature nestled a pink, convoluted mass of fiber. It pulsed and quivered with unceasing life. From it branched strange fibrous nerve-tendrils.

Brain of the Dweller? Brain of the great plant whose species had been evolved toward high intelligence by that same host of mutations which had caused the degeneration of the humans upon this planetoid?

Curt Newton poised his heavy knife over that helpless, quivering plant-brain. And he *thought* to it, in a concentrated mental message.

"I can kill you," Curt telephoned. "I will *kill* you, unless you give me information I require."

Back into his mind came the quick telepathic reply of the Dweller. "What do you wish to know?"

"I must know at once where upon this world we can procure a small quantity of calcium," Captain Future thought. "It is necessary to us if we are to escape from this doomed planetoid."

The answering thought of the Dweller was sharply startled. "What? Is it true that this world is doomed?"

"It's starting to crack open now!" Curt answered. "The end is close at hand. Didn't you suspect that?"

"No, for we Masters have not visual or tactile senses with which to observe," was the reply. "We have noticed increasing tremblings of the ground, but had not thought that they implied a catastrophe to the whole world."

The cold, uncannily alien thought of the Dweller continued broodingly. "So this is the end of our glorious, brief history! For centuries, we have been evolving to greater intelligence and mental power, since the first mutations chanced to change us in that direction. We have dreamed of making ourselves the mental masters of all this world, of growing to such power that we could send our thoughts far out into the universe to explore and

learn. And now that dream is ended."

There was an overtone of weird tragedy in the thing's brooding thoughts. But Curt Newton desperately seized upon one possibility.

YOU COULD still live if you tell us where there is calcium," he thought, to the thing. "We could take your plant-body or roots and brain with us in our ship. You could grow again upon another world."

"It is impossible. Our bodies are so adapted to the chemical conditions of this planetoid that we could not live in a different habitat," answered the Dweller. "However, I would tell you where there was calcium if I could. I bear you no ill will. It is true that we were forced to catch and devour a number of your party, but you forced us to it by camping here. The small animals on which we formerly preyed would no longer approach this place with you here. And our bodies had to have the animal food upon which we subsist."

The Dweller continued his calm mental message. "But though I would help you if I could, I cannot. It is my belief that there is not, and has never been, a single atom of calcium on this world."

Curt felt the blood drain from his heart. "No calcium here at all? How can you know that, when you can neither see nor hear nor move?"

The Dweller replied. "We long ago investigated the history of this planetoid by probing the minds and knowledge of the degenerating human colonists here. We learned thus that this world was a moon in a planetary system whose sun was completely without calcium, potassium and several other elements. An atomic disintegration process similar to the carbon-nitrogen cycle had burned out all those elements before that sun even gave birth to worlds."

Captain Future turned toward the others. He told them what he had just heard from the Dweller.

"The Dweller is speaking the truth," said the Brain gravely. "That explanation of why Asturfall is without calcium is scientifically probable. It explains the silicon structure of the bones of the jungle pigs."

"Then -- then it's all over for us?" Joan Randall whispered, her face very pale but her eyes fixed steadily on Curt.

At that moment a violent new quake rocked them. They saw through the swirling haze that

immense new bulks of rock were rising with a prolonged, grating roar from the lava nearby. The knoll rose and fell beneath them like a clup upon the sea. A new, higher wave of lava rolled its fiery crest toward them.

"That new wave o' lava will cover the knoll!" yelled Ezra Gurney.

One of the mutineers clutched wildly at Captain Futae's arm. "You promised that if everything else failed, you had a way to at least get the ship off this world!"

Curt Newton's haggard face set, his lips tightening. The dreadful last expedient that he had kept in mind all these terrible days now stared him full in the face.

He met it unflinchingly. He knew what he had to do -- and there was small time left in which to do it. His voice rang like a trumpet through the din. "Into the *Phoenix*, everybody. We're going to take off."

"But, Chief!" expostulated Otho wildly. "You know that as soon as we start the eyes without the calcium catalyst, they'll blow again."

"I have enough calcium to act as catalyst for *one* cyclotron," Curt answered swiftly. "I didn't tell any of you, because I was hoping to get more. But one eye will be enough to get the ship off Asta-fall."

"It's raining fire!" screeched one of the mutineers in terror.

A fiery sheet was indeed falling upon them from the smoke-darkened heavens as the burning ashes of the latest continuing eruptions descended.

THEY fought their way toward the ship. Curt steadied Joan's staggering steps, and yelled for Grog to bring the shrieking Rollinger.

Inside the *Phoenix*, he slammed shut the door to keep out the wave of scorching, superheated air that was rolling up from the lava which now was advancing to wash over the knoll.

"Up to the bridge-deck, all of you!" he shouted. "There'll be less danger there if anything happens to the eyes."

They slipped and tripped, for now the *Phoenix* was rocking wildly in its cradle. Curt thrust Otho into the pilot-chair, in front of which were the space-stick, throttles and few simple instruments they had devised.

"Otho, I want you to pilot the take-off," Captain Futae ordered. "Now listen closely. I've only enough calcium catalyst for one cyclotron. I'll put it

in the Number One eye. You must only use that one eye to power the take-off. And you must not let it run for more than a minute, for by the end of that time the catalyst will be used up.

"In that minute," he told the android tensely, "you must get the ship off and start it in the direction of the System. Then cut the eye at once. But do *not* start to take off, until ten minutes after I have gone down to the eye-room to put in the catalyst."

Otho nodded his head understandingly. "I get it, Chief. Ten minutes after you go down, I cut in the Number One eye, use its full power for one minute to get the ship off, and then cut it off again."

Curt Newton paused. His gray eyes had a queer brilliance in them as he met the gaze of his three old comrades.

"Simon -- Grog -- Otho -- just in case anything should go wrong, I want to say that no man ever had finer pals. I'm thinking of the old days on the Moon, of all we four went through together."

It was a moment of tense emotion, and that emotion gripped Joan Randall as she clung to Captain Futae.

"Curt, do you think we're not going to make it? Is that why you're saying goodbye?"

"We'll make it -- I'm sure we will," he told her earnestly. His eyes searched her face with strange watchfulness. He held her fiercely close, kissed her, then turned abruptly away. "Remember, Otho -- in ten minutes!"

Curt's heart was bursting with overpowering emotion as he flung himself down the companionway and back to the eye-room.

George McClinton was there. McClinton had just unscrewed the heavy inertion top of the massive Number One cyclotron. He clambered hastily down off the towering cylinder as Curt burst in.

"McClinton, get up with the others!" Curt cried. "We're going to start, and I want everybody else up there out of harm's way."

The lanky engineer showed no sign of obeying. He came toward Curt, a strange smile on his homely, speckled face.

"No, Captain Futae." It was odd that in this moment of superhuman strain his stammer finally left him. "I *know* what you're planning to do. I guessed it when you made that promise to the others. And I'm not going to let you do it."

His voice was deep as he told Curt, "You mean

too much to the System's future, to do this. And you mean too much to *her*."

There was a faraway tenderness that transfigured the engineer's homely face, as he spoke of Joan.

"But I don't mean much to the System or anyone," George McClinton continued. "That's why I'm doing — *this*."

The engineer's right hand flashed out as he spoke. He had a heavy wrench in that hand, and he aimed the unexpected blow at Curt Newton's head.

Curt had no chance to dodge, so utterly unforeseen was the attack. His skull rang, and he sank unconscious.

CHAPTER XIX

The Call



CAPTAIN FUTURE struggled back to consciousness a few minutes later to hear a bustling roar and feel a violent shock. He was pressed against the floor by brief, terrific acceleration.

The sensation passed swiftly. His head began to clear and he was able to stagger to his feet. He looked dazedly around.

The *Phoenix* was out in space. Its cyclotron had operated for the brief, prearranged moment, and the short blast of power from its rocket-tubes had flung it out in the take-off. It was rushing now toward the gleaming flecks of the Solar System. Astarfall was a smoky, fire-shot ball receding rapidly astern.

Curt looked wildly around the eye-room. "McClinton!"

There was no answer. The lanky chief engineer was gone. And Curt knew where he had gone.

The Number One cyclotron was still hot from that moment of operation that had enabled them to take off. Curt Newton bowed his head against the side of the eye, his face working.

The others found him thus when they came down into the eye-room. Their voices were ringing with excitement and hope, but they were stilled into silence when Curt raised his head.

Few men had ever seen tears in Captain Future's eyes. But they saw them now.

"Chief, what is it?" Greg cried anxiously. "What's wrong?"

Joan was looking puzzledly around. "Where's George McClinton? I thought he was down here."

Curt pointed back toward space. His voice was choked. "McClinton is back there."

They read tragedy in his face. "Curt, what do you mean?"

"I mean that McClinton gave up his life to allow us to escape from Astarfall," Captain Future looked. "He supplied calcium to the Number One eye from the only possible source, *the calcium of his own body's skeleton*."

"He knew the only possible source of calcium, since there was none on Astarfall, was in our own bodies. The average human body contains more than a pound of calcium. Enough to act as catalyst in a cyclotron for at least a minute! McClinton knew that, and gave himself so that we could escape!"

"My God!" cried Ezra Gurney. "Do you mean that he —"

Curt Newton nodded heavily. "Yes. McClinton got inside Number One eye. When it was turned on, the blast of atomic energy reduced his body to ashes. But in those ashes was enough calcium-catalyst to control the flow of energy and keep it from wrecking the eye during that minute."

He added, "He knew I'd have stopped him. He knocked me out, when I came down into the eye-room."

Curt did not tell them, would never tell them, that he had himself had made desperate decision to sacrifice his own life in the same way rather than that they should all perish. But they all understood that now. And every surviving outlaw was humbled.

"When you said good-by to us up in the bridge-room —" Joan began. Then, as her stricken eyes traveled from the silent cyclotron back to the vault of space behind the stern window, she began to sob wildly.

"Oh, Curt, that shy, stammering boy we all teased!"

He held her, soothing her. He heard the calm voice of the Brain.

"It was a fine thing McClinton did. It is too bad that his sacrifice was probably all for nothing."

"What do you mean?" cried Kim Ivan. "We're

clear of Astarfall."

"Yes, and we are rushing toward the System," answered the Brain. "But we *still* have no calcium. We can't operate the cyclotrons again. That means we can't change course to land on any planet. Unless we somehow get help, we'll fall helplessly through the System toward the Sun."

THEY looked at each other, stunned. In all their minds, the same terrible fact had become obvious. If they were to operate the cyclotrons again, another of them must die!

Ezra Gurney yelled suddenly. "Look back there at Astarfall! She's gone!"

They crowded to the windows. A fate that made them forget their own deadly peril fell upon them at the spectacle of cosmic catastrophe they beheld.

The little planetoid had entered its final convulsions. The veils of smoke and steam were momentarily torn from its surface, and they looked upon its appalling surface.

Great rifts were opening in the crust of the worldlet, radiating outward like spreading cracks. Up from these rifts boiled the infernal core of the planetoid. Whole sections of the surface sank beneath this bursting lava like ice-floes submerging beneath the sea.

Wild streams of fire and steam shot for hundreds of miles out from the surface. For several minutes, the geography of the flaming sphere was fluid and formless. Blue lightning wreathed the dying world.

Astarfall exploded! As the cloven crust let the hydrosphere into its interior fiery core, the resulting blast of expanding steam tore the crumbling planetoid into fragments that hurtled out in every direction.

"She's gone!" cried Ezra hoarsely. "That was the end of her!"

They heard the Brain's brooding voice. "The end of the pitiful history of the Cubes, and the strange dreams of the Dwellers."

"Some of those fragments are coming after us!" Kim Ivan exclaimed. "And we can't dodge 'em!"

"We'll have to take our chance," Captain Future said tensely.

The fragments of the exploded planetoid were rushing after them with a speed that would soon overtake the *Phoenix*. They waited tautly.

They soon glimpsed jagged masses of rock whirling past nearby. Smaller debris struck against the *Phoenix'* sides and stem with a rattling clatter

that shook the ship in every beam. Then it was soon over.

"The inner hull wasn't holed by any of that debris," Grog soon reported.

"Then that danger is past," said the Brain. "But we'll soon be rushing into the System. Our speed will accelerate by the hour as we fall toward the Sun. What are we going to do?"

Again their terrible dilemma faced them. Without calcium, they could not operate the eyes to reach any planet. And they had but one source of the element, and that was their own bodies.

Kim Ivan spoke up. "Captain Future, I've been thinking. It was your work and McClintock's sacrifice that saved me and my boys from that world's end. We owe you something for that. I propose that we boys draw lots among ourselves."

"Agreed!" roared the voices of all the mutineers in chorus.

"Oh, no!" Joan sobbed. "No more of us must die in that terrible way! Please, Curt!"

"We'll find another way," Captain Future promised. "We've got to -- now."

He went up with them to the bridge-room. The *Phoenix* was rushing silently on The Lane, the edge of the System, was not so far ahead. For the planetoid had been steadily approaching it during all these past weeks.

The bright little disc of Pluto gleamed, ahead of them and far to the left. Beyond lay the shining specks of the inner planets and the brilliant, small sphere of the Sun.

"If we could only call for help to the Patrol somehow," Curt muttered. "A cruiser could easily contact us before we fell in through the whole System to death."

Ezra shrugged hopelessly. "We ain't got no way to call -- no audiophone."

IT HAD been impossible, of course, for them to undertake the construction of a complex audiophone transmitter when they had built the ship. They had barely completed the ship itself in time. But now their lack of a transmitter seemed to spell their doom.

"Could we build a small transmitter?" Joan asked hopefully.

Curt shook his head. "By the time we got it finished, we'd be crashing in through the inner planets to the Sun. And even then, if we had a transmitter, we'd have no power to operate it. We

still couldn't use the cyclotrons."

The Brain, hovering beside them, spoke thoughtfully. "There is a possible solution. You know that my serum-case embodies a small atomic motor which furnishes power to the generator of my traction-beams and the pumps which repurify the serum. You could take out that motor and generator from my 'body' and soon convert them into a small improvised audiophone transmitter."

Captain Future protested. "No, Simon! You would die when the pumps and purifiers stopped working and your vital serum became toxic!"

"I would not die at once," the Brain said coolly. "I would live for twenty-four to forty-eight hours, though I would lapse into unconsciousness during that time as my serum became toxic. In that time, you might be able to receive help in answer to your call. You could then revive me."

"But if help didn't come soon enough, it would be too late ever to revive you!" Curt exclaimed. "The power of your motor would be exhausted."

The Brain's metallic voice was annoyed. "You are being illogical, Curtis. It is certainly preferable that I should take that risk than that we should all perish. Remember what you had intended doing."

The logic was unassailable, yet Captain Future still hesitated. His haggard face was deeply moved as he looked into the lens-like eyes of his old companion.

"Simon, if this should cost your life --"

"Come, come, you know how I abhor sentimentality," interrupted the Brain annoyedly. "Yet his metallic voice seemed oddly softer as he added, 'Get on with it and stop wasting time.'"

The Brain glided to the shelf-like table beside the instrument panel -- the navigation-desk. His transparent cube rested there, waiting.

Sweat stood out on Curt Newton's brow as he and Otho got their meager supply of tools and began work. Deftly, quickly, they unbolted the bottom section of the Brain's strange body which contained its motive mechanisms.

They removed it, disconnecting and clamping the tiny pipes and cables which connected with the serum-case proper. Now the Brain was merely an isolated living brain in a transparent box of serum. His powers of speech, hearing, movement, had been stripped from him.

Captain Future worked with utmost speed now. Every minute counted, for the Brain's hours of life were now numbered. Rapidly, he and Otho and

Ging took apart the mechanisms that had enabled Simon to live.

The small, powerful atomic motor, with its own compact charge of calcium catalyzed fuel, they set aside. They disassembled the motor's from the serum-pumps and hooked them to the generators that had produced the Brain's magnetic traction-beams. They thus set up a complete new circuit which would emit electro-magnetic waves in the frequency-range of audiophone usage. The little atomic motor was connected to furnish the power.

Curt Newton connected this little improvised transmitter to the makeshift antenna-sphere which Ging had prepared and attached outside the space-door.

He used the macrophonic "ears" of the Brain for microphones.

"It's finished," Curt announced finally. "Turn it on, Otho."

The atomic motor throbbed with power. The generators began to hum, casting their roughly-tuned wave out into space.

Curt spoke into the microphones. *"Ship Phoenix, Captain Future commanding, calling all Patrol vessels or other ships! We need help in the form of calcium supplies! We are approaching the Line from outer space, in the following approximate position."*

He gave the figures of their position as they had calculated it. Then he again repeated the call.

For the next few hours, Curt repeated the message at regular intervals. The last time, the little atomic motor went dead on the last words.

"She's played out!" Otho reported. "Fuel's clean gone. No wonder, when we've been running it full load all this time."

"Do you suppose our message was heard?" Joan asked Curt tensely.

"There's no way of telling," he muttered. "We've no receiver. All we can do is wait."

The *Phoenix* rushed silently on and on toward the Line. In torturing suspense, Captain Future peered haggardly out into the star-flecked void.

The superhuman strain under which he had been laboring for many days took its toll. He slept his head against the window.

It was many hours later that he was awakened by Otho shaking his shoulder.

"Chief, come look at Simon!" begged the android fearfully.

Curt rubbed red-rimmed eyes dazedly. That his

exhausted slumber had been long, he knew from a glance at the planets far ahead. They were brighter, nearer.

Joan and the others were sleeping druggedly. Curt listened with Otho to the shelf on which rested the now lifeless cubical case of the Brain.

He looked into the transparent cube. Its colorless serum had now assumed a dark tinge.

"What's happening, Chief?" Grog asked anxiously.

Curt's answer was a dry whisper. "The serum, no longer repurified, is becoming toxic. Simon is dying."

"But Simon can't die!" burst out the guest robot. "Why, we've been together, he and Otho and I, all my life! Even before you were born!"

Curt Newton felt an icy, utter despair. He looked at them numbly. And then came a hoarse cry from Ezra Gurney, watching at the window.

"Cap'n Future, I saw a rocket-flash in space ahead of us!"

Curt and the others feverishly plunged to the window, and scanned the vault. But there was nothing save the cold, mocking eyes of the stars.

"I -- I guess I'm gettin' delirious," faltered Ezra.

"No!" Grog bellowed suddenly. "Look there!"

They still could see nothing. But the robot's super-keen photoelectric eyes had seen. And presently they caught it, too.

A long, slim cruiser with the familiar emblem of the Planet Patrol upon its bows was driving toward them through the void.

By the time that cruiser came into magnetic contact with the *Phoenix* and space-suited men from it entered their ship, Curt Newton and the two Futaremen were waiting in the airlock.

The young Venusian captain of the Patrol cruiser, when he took off his helmet, stared at Curt and the others unbelievably.

"Captain Future! It's really you and Agent Randall and Marshal Gurney, too! But tell us, what happened to the *Vidisco*? We've been searching for weeks, and then we heard your faint call yesterday."

"No time to explain now!" cried Curt. "The calcium, man! Where is it?"

The astonished Venusian thrust a heavy sack toward him. "I brought this much along. We have as much more as you need in the cruiser."

sack and placed a little of the precious calcium in the catalyst-chamber of the atomic generator from the Brain's body.

The copper fuel was already in the mechanism. They worked with frantic speed, reassembling the apparatus back into the case of the Brain. They could hear it start humming at once, operating pumps and purifiers.

They waited for minutes that to Curt seemed eternities. The dark tinge of the serum in the Brain's case slowly faded away. But that was all.

"We were too late," Otho whispered strickenly. "Too late to revive Simon."

Then the Brain spoke. Simon Wright abhorred show of emotion. He would have died rather than to have displayed his feelings now.

He said metallically, "Well, what are you all staring at? The experiment was a success, wasn't it?"

The *Phoenix* landed on the spaceport of Tartarus City, on frigid Pluto, two days later. With it landed the Patrol cruiser that had brought them salvation. Its officers came to take charge of the mutineers and transport them out to the prison moon.

Kim Ivan and his men trooped out into the chilly dusk and stood quietly while the Patrol guards gathered around them.

"You won't have any trouble with us, boys," the big Martian said tensely. "We've been so close to death that we're not going to find Interplanetary Prison such a bad place for a while."

Curt Newton went toward the towering Martian. He held out his hand quietly. "Kim, will you shake hands?"

The big pirate's battered face grinned at him as he extended his fist. "I'm glad there's no hard feelings, Future. We went through quite a lot together."

"We did," Curt nodded. "And I've an idea we'll meet up again."

"Oh, sure, when you come out to Cerberus prison visiting," said the Martian ruefully.

"Kim, Morenos and the other men who actually killed the *Vidisco's* officers are dead, and they did it against your orders," Curt said. "That won't be held against you and your chaps. And there's such a thing as commutation of sentences for men who have had enough of outlawry and would like to blast a straight rocket-tail."

Kim Ivan's massive face flamed. "Future, me and my boys won't mind Interplanetary Prison one

CURT raced back up to the bridge. His hands were shaking as he tore open the

THE FACE OF THE DEEP

little but, if we have that to hope for!"

Curt Newton grinned in turn. "I'm not promising anything, you big ruffian. But I've an idea we'll meet up on the space-trails some day."

When the convicts were gone, Curt turned. Grog and Ottho had resumed their interminable argument. The Braun had gone with Ezra Gurney.

But Joan was standing in the frigid dusk, looking up at the dark vault of the heavens. She did not turn when he reached her side.

"Curt, I was thinking," she said softly. "It's

where he would have wanted to be buried -- in space."

He did not need to ask of whom she spoke.

He put his arm around her shoulders as he answered slowly.

"Yes, Joan. Any spaceman would want such burial, to have his ashes scattered out there on the face of the deep."

And they stood silent, gazing out into the vast vault of that shoreless sea in which a world and a hero had perished.



No. 11

THE PUZZLING CASE OF THE SPACE QUEEN

An Interplanetary Pirate Impersonates Captain Future in Order to Commit Acts of Robbery on an Incredibly Vast Scale!

ONE of the most astounding episodes in the career of the Futuremen began with the puzzling case of the *Space Queen*.

The *Space Queen*, a big, fast liner in the outer planet trade, was on its way from Saturn to Earth when it happened. The ship was twelve million miles inside the orbit of Jupiter when its instruments warned that another craft was cutting across its course.

The other ship soon came into view. And the officers of the liner exclaimed in astonishment as they recognized that small, teardrop-shaped craft.

That ship was known to every rocketeer in the System.

"It's Captain Future's ship, the *Comet*! And he's signaling us to slow down."

"Do so at once," ordered the captain promptly.

THE RADIUM CASES

As the liner slackened speed, the smaller ship came almost close enough to touch it. Across the gulf between the two craft came hurtling three figures, only two of whom wore space-suits.

They entered the *Space Queen* through its airlock and were greeted by a somewhat anxious captain and officers. The three visitors were a tall red-haired young Earthman, a lithe, rubbery-looking man, and a huge metal robot. Everyone recognized the famous trio instantly.

"What's up, Captain Future?" asked the liner captain worriedly.

"You have a cargo of radium aboard?" asked the red-haired young Earthman crisply.

The captain nodded. "Yes, ten million dollars' worth of the pure element."

A THIEVING PLOT

"There's a plot afoot to steal it from you," the other told him rapidly. "It would involve the wrecking of your ship. I'm going to take that radium aboard the *Comet*. I'll deliver it later to Earth."

Any other man in the System would have been met by a burst of laughter had he made that suggestion. But confidence in the integrity of the Futuremen was universal and absolute. The captain did not hesitate a moment.

"Very well, I'll help you transfer the radium cases. And thanks a lot for stopping in to help us, Captain Future!"

The small lead cases were soon transferred to the little teardrop ship. With a final flash of its signals, it drove away into the void. Vastly relieved, the captain ordered the *Space Queen* to proceed to Earth.

Upon arrival at Earth, the officer reported to his company officials what had happened. They took the same view of it as he had done.

"We're lucky the Futuremen took a hand in the thing - otherwise we might have lost radium and ship, too! They'll probably bring the radium in before long."

A NEW METHOD OF PIRACY?

A few days later, a space-freighter came into Mars with a tale of a similar experience. The Futuremen had halted it in space, and had taken from it a shipment of platinum whose safety Captain Future had declared to

be imperiled. In rapid succession half a dozen other ships reported that the Futuremen had taken similar valuable cargoes from them.

The officials of the shipping companies and the System Government speculated as to what was going on. It was believed that some big plot to rob interplanetary shipping by a cunning new method of piracy had been hatched, and that the Futuremen had intervened to baff-
fle the plotters.

"They can't get ahead of Captain Future," remarked several officials, satisfied. "He got wind somehow of what was being planned, and is acting to prevent it. Look at the valuable cargoes he's saving."

But as days went by, a certain doubt began to arise. The Futuremen were still operating in a puzzling way, out among the planets. Curt Newton and his followers were relieving one ship after another of valuable shipments, but not one of those shipments of precious ores and metals had yet been delivered to their destinations.

That was brought to the attention of the System President.

"Oh, it's all right - Future will bring the stuff in when he has time," he said.

"Nobody doubts that, but the delay is embarrassing several companies," pointed out his secretary. "Won't you call him about it?"

The President acceded. He put through a television call-signal tuned to the secret wave which few people knew. He was calling the laboratory-home of the Futuremen, on Earth's Moon.

A SHOCK FOR CAPTAIN FUTURE

Captain Future answered. And Curt Newton listened with increasing bewilderment to what the President said.

"I don't know what you're talking about!" Curt exclaimed. "I never took any shipments off those ships. Grag and Otho and Simon and I have been right here on the Moon for weeks, working out a new invention."

"But that's impossible!" said the President. "Those ship officers all saw and talked with you, when they turned over the shipments to you."

In the television-screen, Curt's keen face showed alarm.

"There's something wrong. I'm coming to Earth at once."

When Curt and the three Futuremen reached the office of the president, the famous planeteer listened closely to the official's recital.

Then he asked, "Call in any of those ship officers who are on Earth now."

The captain of the *Space Queen* was one of them.

"You say you turned over that radium shipment to me?" Curt asked him sharply. "Are you quite sure it was me?"

"Of course I'm sure," replied the captain. "You were

as close to me as you are now - you and your two pals there." He pointed toward Grag and Otho.

"Why, you're cr -" Grag started to ejaculate, but Curt silenced him. He told the captain and other officers, "That's all I wanted to know. Just a routine acknowledgement for the Government."

A CRIMINAL IMPERSONATOR

Satisfied by that explanation, the ship officers withdrew. Captain Future looked steadily at the President.

"It's clear now what is going on," he declared. "Someone is impersonating me. Someone who is using my name, and the confidence of the System in me, to perpetrate robbery on a vast scale."

The President was dumfounded. "But those ship-officers all swore it was you and your Futuremen they met! They saw Grag and Otho, as well as yourself. And there isn't another robot in the System like Grag!"

"I know that, and I can't understand it," Curt admitted. "But it's certain that I've got a criminal double, and that he and other pirates are impersonating me and the Futuremen."

"Good Lord, he's still taking millions away from ships and isolated planetary towns by this trick!" exclaimed the President, aghast. He reached for the television. "We'll broadcast warning to the whole System of what's going on."

"No, don't do that!" Curt intervened quickly. "It would throw all the companies into a panic. They'd storm your office, demanding that their shipments be recovered. The criminals behind this would know that we had already foreshadowed their plot."

"Also," Captain Future added grimly, "it would make things plenty hot for me. A lot of people wouldn't believe that we Futuremen could have doubles so perfect as to deceive everyone. A lot of people would think that we had actually robbed all those ships of their cargoes."

"Holy sun-imps, I never thought of that!" Otho exclaimed. "Say, our reputations are ruined forever unless we catch these doubles of ours!"

"More than that, our usefulness in the System will be permanently impaired," Curt warned. "Unless we capture and expose these plotters, there'll always be a lurking doubt as to our innocence."

THE FIRST FAINT CLUE

Their problem was complicated by the time factor. Already, the shipping companies were murmuring complaints because the Futuremen had not yet delivered the valuable cargoes they had taken. Those murmurs would soon grow into open expressions of doubt.

Curt Newton attacked the mystery with characteristic concentration. His first quest was to ascertain the identity of the criminal masquerading as himself.

"Only plastic surgery of the most advanced type

could make that criminal into such an exact double of myself," he pointed out. "But even super-surgery has its limitations. It can't alter height, weight or certain skull-measurements. Therefore, the criminal selected to be my double would have to coincide with me in those measurements."

That gave the first faint clue. They went through the voluminous criminal records of the Planet Patrol, each card of which gave data concerning one of the System's criminals. They searched the Earthman section.

The photo-electric scanning-machine, once it was set, went rapidly through the cards and threw out several scores of them which gave the descriptions of criminals who were of Captain Future's exact height.

Another scanning of these cards threw out a few dozen criminal descriptions, corresponding to Curt in weight. Continuing this cross-check against other undesirable factors of skull-measurement, the cards were finally narrowed down to one.

THE FATAL CARD

"Garis Crain, Earthman, aged 26," read Captain Future. "Black hair, brown eyes, scar on left cheek. Convicted first for robbery of a Venusian *kniga* warehouse." He read off the long list of crimes, ending with, "—escaped Syrtis Prison on Mars, June eleventh, two thousand—unapprehended."

"Ten to one, this Garis Crain is my double," Curt said keenly. "Listen to this final notation, dated only a year ago."

He read, "Crain believed to have been leader of pirate band which raided the mining town of Noomst, on southern Saturn, August fourteenth. Pirates were pursued to the Zone, but escaped."

"Well, how does all that help us?" Otho demanded skeptically.

"It proves that Crain has been operating from within the Asteroid Zone," Curt affirmed. "You know where his base would be there."

"Pirates' Planet, of course," said the Beain.

Captain Future nodded. "No doubt of it. That old thieves' asteroid is still a hangout for the mid-System outlaw bands." He went on puzzledly, "But who could have made Crain into such an exact double of myself? Remember, it would take super-skill in plastic surgery. There aren't a hundred surgeons in the System who could use instruments well enough to do that, and who would know how to effect re-coloration of hair and eyes."

At once, they brought out the file cards on the surgeons of the System and scanned it.

"Crain may have kidnapped a surgeon for the purpose," Curt was saying. "If one is missing—"

CRIME'S BRAIN TRUST

They soon discovered that the only surgeon of suffi-

ciently high skill who was presently missing was one Thua Quar of Venusopolis.

"Listen to this!" Curt read. "Thua Quar disappeared four years ago, after being sought by the Venus section of the police for having used his plastic surgical skill to give a new face to a criminal fugitive. Rumors of the System underworld name Thua Quar as one of the Four."

"The Four?" repeated the President perplexedly. "Who are the Four?"

Curt's eyes were gleaming. "They're a quartet we Futuremen have been after for a couple of years! They are, actually, a brain trust of crime. We believe they've been behind some of the biggest criminal coups in recent times. The vague information we've picked up is that they consist of four master scientists, an Earthman, a Venusian, a Martian and a Saturnian, who maintain a secret consulting service for criminals."

"Any pirate or criminal who needs a special scientific weapon for his purposes, goes to the Four. They usually can furnish what is needed, and they take a big percentage of the proceeds of the coup. They take none of the risks themselves, and so have never been caught. I'm sure that the Four are behind Crain's impersonation of myself."

"Say, you don't think the Four have their base somewhere on Pirates' Planet?" Otho cried. "Maybe that's why we've never been able to find it."

"It looks as though their base might be there," Curt admitted. "But it's sure to be cunningly hidden. Our best chance of finding it is through Crain. Catch him and we'll have a real lead to the Four."

"But how the devil are we going to catch these doubles of ours?" Grag wanted to know.

Captain Future grinned a little. "We're going to let them catch themselves, as we've done with lots of others. Listen, here's my idea . . ."

ON THE TRAIL OF THE FOUR

A few days later, a dumpy little freighter took off from New York spaceport. It was listed as the *Willingor*, bound for Jupiter with a small but valuable cargo of refined platinum and tantalum.

The little old freighter plugged slowly out past the orbit of Mars. Actually, it was not a freighter at all. It was the swift little *Cowet*, ingeniously disguised by a fake superstructure of light metal plates built around it to make it look bigger and dumber. Its only crew were the Futuremen.

They were not far beyond the orbit of Mars when what Curt Newton had hoped for happened. A small ship came racing up toward them from the right quarter. It was an exact replica of their own *Cowet* and it flashed an urgent signal.

"Captain Future, requesting you to stand by for us to come aboard!" came from the television, in a voice un-

cannily like Curt's own voice.

"Okay, Captain Future!" Curt answered in a deepened voice. "We're standing by!"

The fake *Cowet* drove alongside the disguised real *Cowet*. From the pretenders ship came three figures, two of them in space-suits. The third was a great robot exactly resembling Grag.

Grag himself was speechless.

"There isn't another intelligent metal man like me in the System!" he protested. "But that one looks like me!"

"The nerve of those crooks!" Otho was raging. "Look, one of them is a dead ringer for me!"

"Be ready now," Captain Future ordered. "Here they come."

The three pretenders came into the airlock of the disguised *Cowet*. And as soon as the three doubles were inside, the Futuremen grabbed them.

FACING THEMSELVES

It was as simple as that. The imposters hadn't a chance to fight, because they had not been expecting the necessity. They found themselves facing a brace of deadly proton-guns, and stood speechless.

The Futuremen were speechless too, for the moment. These three were uncannily exact replicas of Curt and Otho and Grag. For a dramatic moment, the real Futuremen and the imposters faced each other. And no outsider could have told which was which.

Then Grag uttered a triumphant cry.

"I knew there wasn't another robot like me in the System! Look, Chief!"

And Grag advanced upon the pseudo-Grag and tore at his metal body. The fake Grag was revealed to be a huge, vicious-faced Jovian criminal disguised in a metal space-suit made to resemble Grag's metal body.

Captain Future spoke crisply to his own glaring double.

"A neat trick you've been using, Crain. Yes, I know who you are - Garis Crain, pirate and criminal, wanted by the Patrol for a dozen offenses."

Crain's face, a face so amazingly like Curt's own, became desperate and bunched in expression.

"It was the Four who made you into my double, wasn't it?" Curt pressed. "And their base is on Pirates' Planet somewhere, isn't it? Well, you're going to take us there. You know the secret pirate wave-code and you can navigate us safely through the swarms."

Crain assumed an attitude of sullen defiance. "I won't do it."

"Oh, yes, you will," Curt said relentlessly. "Because if you don't, we'll be wrecked in the swarms. And you don't want to die. You'd a lot rather go to Interplanetary Prison, than die."

The Futuremen securely bound their prisoners. They disabled the fake *Cowet* and left it drifting. They shucked away the disguise from the real *Cowet*, and

started into the Zone toward Pallas.

Curt steered right toward the dangerous meteor-swarms around Pallas. And when disaster seemed imminent what he had foreseen happened. Crain's nerve broke. The criminal hastily babbled the secret wave-code by means of which they could steer their way through the dangerous swarms.

PIRATES' PLANET

Thus the *Cowet* came to Pirates' Planet. It descended toward the night side, and poised above the dark blot of Red Lake. Miles to the west, the lights of the pirate city, Freetown, threw a glow into the sky.

"Now take us to the hidden base of the Four," ordered Curt.

"Captain Future, I don't dare!" Crain cried. "You don't know what the Four are like. They're devils! It was they who thought up this whole imposture, and picked myself and two others to play it because we were the right height and so on. If you try to meddle with them, they'll kill you - and then kill me for bringing you here!"

Curt again applied pressure. "Crain, unless you take us to the Four, do you know what I'll do? I'll drop you over there in Freetown. The pirates over there don't know about your impersonation of me. You'd not be fool enough to tell them or anyone. So when you drop in on them, they'll think you're really Captain Future. You know how those outlaws hate me. You can guess what they'll do to you, thinking that you're me!"

Crain's ghastly face showed that he knew only too well what the bloodthirsty corsairs would do if they thought they had captured Captain Future.

"All right," he choked. "I'll take you to the base of the Four. But you'll never come out of it alive."

He directed Curt to steer the *Cowet* toward a rocky hill on the eastern shore of Red Lake.

"The whole hill is hollowed out," he explained. "The secret laboratories of the Four are inside of it."

"Good - we'll land right by it," Curt declared. "The Four will think our ship is the fake *Cowet* returning. And they'll think that Grag and Otho and I are Crain and the other doubles coming back from the trip!"

The audacity of the plan was typical of Captain Future. And it held good chance of success. His hopes were high as he landed the *Cowet* in the darkness beside the rocky hill.

Crain shakily gave them directions. But before leaving the ship, Curt rapidly prepared three heavy little metal chests which he and Grag and Otho took with them. Simon remained to guard the prisoners.

"Why do we have to carry these things?" grumbled Grag.

"We're supposed to be bringing back platinum and tantalum, aren't we?" Curt countered. "Besides, they may be useful in other ways."

CRIMINALS' HIDE-OUT

Otho was chuckling as they made their way toward a cunningly disguised opening in the side of the hollow hill.

"The Four will get an awful shock when they find out the doubles are the real Futuremen."

They entered the cavernous opening in the hillside. A passage led through solid rock to a square rock chamber in which was a heavy door.

Curt touched the electrombell beside the door in the signal he had extorted from Crain. His hand rested on his proton-pistol as they waited.

"Be ready to jump them the minute we have all four together," he muttered to the others.

At that moment, a trap-door opened beneath them. They plummeted down through a vertical shaft into a space beneath. Curt struck a stone floor with a stunning shock. . . .

Curt woke to find himself tightly bound. Otho was bound also, sitting beside him, and Grag was secured by a heavy chain.

They were in a big, brightly lit laboratory somewhere inside the hollow hill. Four men faced them - a crafty looking, iron-haired Earthman, a suave young Venusian, an ancient, wrinkled-faced Martian, and a Saturnian dwarf with a freakishly huge head.

"The Four!" he muttered.

"Yes, we are the Four, Captain Future," coolly answered the crafty Earthman. "We have anticipated that sooner or later you would call upon us."

He laughed at Curt's expression of surprise. "We knew of your reputation for resourcefulness and audacity. We believed that sooner or later you might be able to locate our base here, and that if you did, you would attempt to enter by passing yourself off as your own doubles! So we took the precaution of inspecting Crain and the other doubles with X-Ray scanners, each time before we let them enter. The scanners would show whether the robot was really a robot, or a man in disguise."

"Devils of space, so that's what gave us away!" hissed Otho.

"It was not hard to disarm and bind you three while you lay stunned by your fall below," continued the Earthman. "I suppose you realize your helplessness. What did you do with Crain and the others?"

Curt pretended to be crushed. "They're out in our ship," he muttered. "I suppose you're going to murder us?"

"After we have extracted as much valuable information as possible from you - certainly."

THE MYSTERIOUS CHESTS

"Can't we make a bargain?" Curt asked desperately. "Those chests we brought really have a fortune in platinum in them. We wanted to carry out our whole

scheme just as though we were really Crain and the others, so there wouldn't be any slip-ups. Won't you take the platinum and let us go?"

The Earthman pondered. "Bring in the chests," he ordered.

The young Venusian member of the Four did so, one by one. Curt saw that there was suspicion on the face of the Earthman.

"Before we open the chests, use the X-Ray scanner on them," he directed.

The dwarfed Saturnian brought the instrument and peered through it at the chests.

"Nothing in the chests but bars of metal," he reported.

"So you were telling the truth?" the leader of the Four remarked to Curt. "Your devotion to realism was, carried too far, my dear Captain Future. You lose not only the platinum, but your lives, also."

He bent and unlocked one of the chests, and raised its lid. Whoosh! A cloud of invisible gas that had been stored in the chest of bars at high pressure suddenly burst out of it.

The Earthman fell in his tracks as the gas reached his nostrils. Almost in the same instant, the other three of the Four and also Captain Future and Otho lost consciousness as the potent gas expanded.

INVISIBLE "SLEEP-GAS"

Curt awoke, to find Grag bending over him. He scrambled to his feet.

"The Four are safe?"

"Sure, I've got 'em nicely trussed up," Grag boomed. "Chief, I sure was surprised when that gas knocked everybody out. Everybody but me, that is. It couldn't affect me, since I don't breathe."

"Yes, I figured on that," Curt grinned. "You see, I hoped we'd be able to nab the Four without trouble. But I thought that it was better to have a card up our sleeve in case Crain had tricked us and given us a wrong electrombell signal that would betray us. So when I put some metal bars in those chests, I also pumped the chests full of the invisible Uranian 'sleep-gas,' from that tank of it we carry for making 'sleep-bombs.'"

"I knew that the gas would get Otho and me, as well as the Four, if it were ever released," Curt added. "But it wouldn't affect you, and I counted on your being able to set things right in the hour or so that we'd be unconscious."

"You didn't count in vain, Chief," boasted Grag proudly. "Though it took me nearly the whole time to cut that chain away from around me, by starting one of their atomic blasters and using its flame."

"Anyone could have done that, if he happened to be a creature too dumb to breathe," snapped Otho to the robot. "Come on and help me carry these four precious rascals out to the ship. They're going to keep Crain

company out in Interplanetary Prison."

That is why, out in the great prison on Pluto's moon

Corberus, a life sentence is being served by a man who is an uncanny double of Curt Newton. And his life is not easy there. Too many of his fellow prisoners persist in believing that he is the hated Captain Future!



Randy Lane, supercargo

ALI BABA, JUNIOR

By OSCAR J. FRIEND

Pirates of Mercury Find Themselves in a Pretty Pickle!

"RANDY, look!" Thalia gasped. "It's turned my finger a lovely pink!"

When the daughter of the governor of the Royal Venusian Warehouse spoke in that voice I was head over heels in love with her more than ever. But who was I, Randolph Lane, supercargo on the space freighter *Terrapin* on the Earth-Venus run, to aspire to the lovely cornflower bloom of Venus?

Nevertheless, I did. And she liked it.

I saw then that the sweet pickle Thalia had been tasting had indeed turned her lovely pastel blue coloring to a delicate pink. Maybe I'd better explain that the people of Venus had an atom of some alkaline substance in each blood cell instead of the atom of iron found in that of Earthmen. This, scientists told us, made the Venusians an alkaline race of a delicate blue color. Otherwise, they were

similar to us.

The Mercurians, a piratical people of Mercury, had an atom of mercury instead of iron, and they were a dark-blue-skinned race. A poisonous people, anyway, always raiding the spaceways for cinnamon, and taking delight in raiding the Venusian warehouses for the cinnamon ore and liquid mercury we freighted there from Earth.

The Venusians were crazy about the pink and bronzed Earthmen. They preferred our color to their own and spent fortunes in their beauty parlors trying to acquire it and having their hair tinted red.

As I looked at Thalia's pink finger a wonderful idea struck me.

"You like that pickle?" I asked. "It doesn't make you ill?"

"Of course not, silly!" she exclaimed. "And I love them!"

I'm gifted with a long neck, any-

w, and nobody can stick a neck out as far as I can.

"You've as good as got forty barrels of sweet pickles in your private warehouse right now," I promised. "Just as soon as the Terrapin makes another trip to Earth."

"Oh, Randy!" she murmured. "Would you do that for me? You must love me!"

"More than anything in the Solar System. And I've an idea that if you eat enough pickles the vinegar will give your alkaline beauty that pink color you people are so crazy about."

Thalia flung her arms about my neck and kissed me. Things would likely have been arranged for the future right there if Litmas, her father, hadn't come waddling into the chamber.

"Here, here!" he gurgled in swift anger. "What's all this behind my back? My daughter in love with the supercargo of an Earth freighter? Never! If you want to show your mettle, young man, you'll do something to stop these beastly Mercurian pirate raids."

"But, Father—" began Thalia.

"Silence!" roared Litmas, his pale blue face purpling. "As for you, Lane, get back to your ship."

I waved a mournful goodbye to Thalia. She wriggled her pink forefinger after me.

IT WAS when I got back to the spaceport at Chicago that my difficulties began. I had promised Thalia forty barrels of pickles, and there wasn't space in the cargo holds of the Terrapin for even one extra barrel. But I had to make good my promise. The upshot of it all was that, as supercargo, I did something for which I could have been fired.

I deliberately left forty barrels of cinnamon in the warehouse and substituted forty barrels of pickles, hiding the fact on my manifest sheets. The Terrapin took off for Venus with nobody else the wiser.

We docked at the Royal Venusian Warehouse space wharf, and I busily saw to the unloading of my gift for Thalia. The pale-blue-skinned stevedores had just rolled the last barrel

into a storeroom when there was a rush of feet, wild shouting—and a band of dark-blue Mercurians came charging into the docking area. A raid of Mercurian pirates! After the Terrapin's cargo of cinnamon and mercury, of course.

Ray guns spat, and several Venusians writhed down in death.

"Stand as you are, Earthman!" snarled the leader. "This is no loss to you."

I stood helpless while the Mercurians clumped into the storeroom on their gravity stilts, donned glare goggles and went to work opening the heads of the forty barrels. Mercury was life to them, and they were in a hurry to grab the mineral and get away before the Venusian guards could reorganize and counter-attack. I gripped the hilt of my electric knife in hesitation. I heard the sounds of tumult outside the stockade as the Venusians prepared to attack.

Then I heard a horrible choking sound behind me. I whirled and stared in amazement. Blue-skinned Mercurians were reeling about and tearing at their throats. The storeroom was full of fumes. Vinegar fumes from the opened pickle barrels.

My guard turned to look. At that instant Litmas led his Venusian guards in at the charge. All was riot and confusion for a few minutes as we all got tangled in the fight and the overturned pickle barrels. It was soon over—because the Mercurians were mysteriously dying.

To my astonishment all the pale blue Venusians were turning a pale pink.

"Ha!" cried Litmas, clapping me on the shoulder. "You've done a splendid job, Lane. You've overcome forty notorious Mercurian raiders and their leader I've been after for months. How did you do it?"

Thalia came running in on flying feet, and sight of her gave me the answer. Just as Venusians reacted like Utnus to the vinegar of the pickles, the Mercurians with mercury in their veins reacted to the acid in the vinegar. Vinegar was deadly poison to them. They had salivated themselves! (Continued on page 117)

THE WORLDS OF TOMORROW

THE PIRATES' PLANET

How the Peaceful Asteroid Pallas Became the Base of Vandalism When Powerful Outlaw Chiefs Made It Their Own!

AMONG the thousands of little worlds that make up the great asteroidal belt between Mars and Jupiter, one planetoid deserves a particular notice. It is not large. But it has always been one of the most historically glamorous bodies in the Solar System.

Astronomers list it as the asteroid Pallas, and note that it has a thin atmosphere and hydrosphere. Biologists mention its unusual plant and animal life, its creeping jungles of rootless trees, its treehoid monsters and oddly-developed human natives. Colonial sailing directions refer to it as Body 416, and list the elements of its complicated orbit.

A Lurid History

But all the rest of the System knows the little world as Pirates' Planet. For this lovely little sphere out there in the middle void has a lurid name in the annals of inter-planetary history.

"Pirates' Planet," wrote a sober historian, "is the epitome of an era in System history. Perhaps no spot in our universe ever saw so much raw violence, lust and crime, as did this famous asteroid."

We may add to that judgment a quotation from the notorious corsair, Thorn Lana, whose name looms so large in the record of the place.

"If Hades ever really existed," commented that outlaw trenchantly, "it was at Pirates' Planet when the corsair fleets were in."

"A Green and Peaceful World"

The first explorer to visit Pallas was the famous Jan Wren, who followed up the pioneering voyages of Johnson and Carow with his own immortal expedition to Pluto-Wren's ship stopped at Pallas on its outward voyage. It seems probable now that he noted it in his log as "a very green and peaceful little world."

Pallas was peaceful enough then, and for a score of years thereafter. During that time, the asteroid was thoroughly explored and mapped by several explorers. They discovered that Pallas, like many of the larger asteroids, was inhabited by a near-human native race. These Asteroidians, as

the various peoples of the planetoids are usually called, were and still are a simple, primitive and somewhat child-minded race.

First Explorers

These first explorers, of course, were assembled to find human inhabitants upon the asteroids as well as on the great planets. It was a long time before planetary archaeologists solved that mystery, and disclosed that ages ago our whole Solar System was colonized by a human race from the distant star Danab, whose remote descendants we all are.

Because they did not suspect that, these first explorers of Pallas were dumbfounded by the amazing structure they discovered in the southern hemisphere of the asteroid, northeast of the Poison Lake. This structure consisted of a massive, templelike building of black synthronon, surrounded by a complex mechanism made of hitherto unfamiliar metal. The mechanism was operated by an ingenious set of solar power, and had apparently been smoothly running for many ages. It seemed designed to point a great metal finger always toward the star Danab.

Bright Crimson River

This Temple of Danab, as the puzzled explorers called it, is clear enough in purpose now. Undoubtedly the colonists who came to our System from Danab long ago set up this curious device as a perpetual reminder of their native star. Their degenerate descendants, the natives of the asteroid, had long lost all idea of the meaning of the temple but still venerated it with a superstitious reverence.

The explorers' accounts described much of the creeping jungles of rootless trees; of the Red River, whose waters are bright crimson because of their sediment of brilliant sands; and the Red Lake into which they empty; of the Poison Lake and the blasted region around it called the Poison Desert, in which live certain animals that have adapted themselves to the toxic environment; of the so-called Ghost Hills in the north, made terrible by the Man Spiders, which were treehoid creatures of great size and ferocity whose unusual be-

and cunning earned them their

As after the first interset in these areas of exploration, Pallas was largely ignored by the System peoples for some years. The planetoid was hard to reach, lying as it did at the center of a dangerous region of meteor swarms and smaller asteroids. No settlement upon it was attempted, for it had no valuable mineral resources to tempt Earth prospectors and promoters.

But the very isolation and inaccessibility of Pallas attracted another class—the space-pirates. These were the wild early days of interplanetary travel.

The Planet Patrol had not yet been organized, and ships carried valuable cargoes from world to world without protection. It was inevitable that piracy should spring up, and that the location of Pallas would make it an ideal base for the corsairs.

Infamous Outlaw Chiefs

It is impossible in this space to tell of all the outlaws who at one time or another made Pallas' Planet their headquarters. To do so would be to write a history of space-piracy. It must suffice to mention merely the most famous or infamous of the outlaw chiefs—the men who blazed a red trail across the System and whose names were household words.

John Haskin was the first of these great corsair kings. He was a young Earthman who had roamed with Carey, but had been forced to flee to space because of a killing in a spaceport drinking place. Haskin, it was, who first established a base on Pallas, at the western end of Red Lake. Swiftly, he gathered malcontents, criminals and outlaws from every world of the System. He was able to get forth with no less than 200,000 criminals, to harry the commerce of the void.

Haskin's loot must have been incredible in value. And it has formed the basis for the most persistent and romantic legends in the System. For Haskin was supposed to have hidden his hoard somewhere on Pallas, and it was never found.

The most popular story is that he hid it in the Caves of the Man-Spiders, in the northern hills. Indeed, it is asserted that he had somehow made treaty with those cunning arachnid monsters, and that they allowed him to hide the treasure hoard there because they well knew that it would act as a magnet to draw endless treasure seekers into their claws. Certainly many dreamers have perished searching those dreadful caverns for Haskin's hoard.

Haskin's depredations lasted four years. They became so outrageous that they hastened the organization of the Planet Patrol. And the Patrol's squadron finally cornered Haskin's fleet near Mercury, and blasted the corsair ships to fragments in those sun-flooded reaches of space.

Haskin's lieutenants quarreled over the leadership of those pirates still remaining on Pallas. It was not until six years later, however, that the pirate menace became again dangerous. The leader this time was the so-called "Butcher of Mars." He was

a Martian named — and he was the most brutal of all creatures of any world save to rook the void. Massacre and torture of captured crews were his regular practice.

The Most Dangerous Pirate

The Planet Patrol never caught up to the Butcher. He was shot down by one of his own men, during a raid on Neptune. The man who killed him succeeded to leadership of the corsairs. That man was Thorn Lane, perhaps the most dangerous pirate in history.

Lane was dangerous because he was an ordinary pirate. He had been a captain in the Planet Patrol, but had been cashiered for a breach of discipline. He always affirmed that he was innocent and that the charges against him were motivated by jealousy, and the evidence seems to give some color to that statement. Be that as it may, Thorn Lane in his bitterness took up the calling of pirate and became a dreaded leader.

Lane organized his corsairs along lines of strict discipline. By that time, Presetown, as the pirates grandiloquently named their base on Pallas, had become a place of nightly carnage and murder. Lane instituted stern law there, and had his pirates functioning so efficiently that they were actually able to meet the Patrol on even terms.

The Patrol finally gathered its forces to make a frontal attack on the pirate base. It proved disastrous to the attackers. The pirates could navigate the wilderness of meteor-swarms around Pallas, since they were aided by the aid of coded beam signals emitted by projectors planted on certain of the swarms and smaller planetoids. The Patrol armada, unable to interpret the coded signals, got hopelessly entangled in the whirling swarms.

Lane's pirates attacked before the Patrol fleet could disentangle itself. The result was the one big defeat in the history of the Patrol. Its cruisers were driven out of the whole region, after suffering great losses. It was a complete victory for the pirates, and they wildly celebrated it that night in Presetown.

And during their celebrations, Thorn Lane shot himself. Undoubtedly, his old loyalty to the Patrol had weakened him to a sense of guilt as what he had done, so strong that he exploded it with his life.

After Lane, a succession of outlaw kings held power on Pallas. One of these, the notorious Rok Olar, is interesting because he was one of the few who did not come to a violent end. Always more intelligent and humane than the majority of pirate captains, Rok Olar foresaw the inevitable end and forsook his career. He disappeared and was not heard of for thirty years. Then, a very old man, he was discovered living quietly on Saturn under an assumed name. Because of the help he was able to give the System Government in the sensational Case of the Seven Space-Stones, Rok Olar was given a pardon for his past misdeeds and allowed to live his last few years in peace.

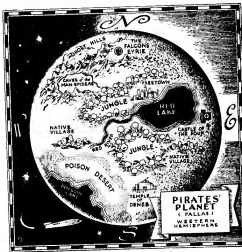
Another pirate of that period, and one of the most renowned in legend, was the Falcon. He was never an organizer and leader like John Harkin and Thorn Lane. He was a lone wolf of space, operating with a few picked men in a small armed cruiser.

He had no connection with the pirate hords at Freestown, but had his own secret base high in the northern hills. From his Eyrie, as he called it, this deadly young Earthman slipped out time and again to single out some especially valuable cargo for his prey.

Marshal Kara Gurney, then Captain Gar-

In the years after that, the inefficiency of the Patrol set down the menace. Freestown dwindled gradually from its former infamous splendor, and was haunted only by a few lesser birds of prey. Yet at one time, the astonishing quartet of the "Four" threatened to bring back the old terror.

But the story of the "Four"—four criminal scientists from four different planets who set up their castle on the eastern edge of Red Lake and made it a poisonous laboratory of crime—is too recent to need retelling. It belongs to the age of Captain



ray of the Patrol, conducted an epic search for the Falcon. They met, finally, in a cosmic action off Saturn that is supposed to have been almost the most terrific space battle ever fought.

What little is known of that terrific fight in which the Falcon finally met his death, was told by Gurney's crew. Kara Gurney himself refused to talk of it, and transferred from the Patrol to the planetary Police system, immediately afterward. Only a few people know that the Falcon was Kara Gurney's younger brother.

Pature. For it was Curt Newton who finally crushed the Four.

Pirates' Planet is now but a shadowy semblance of its former sinister aid. There are still pirates in the System, but they have moved out to the wilder moons of Saturn and Uranus, to the remoter interplanetary wildernesses.

Only ghosts haunt the ruined streets of Freestown that once ran with blood and gold, and the little asteroid is as peaceful as when Jan Wexel first landed there 100 years ago.



A tiny piece of metal sailed into the brute's throat, and the animal sprang into the air

THE TREASURE

By WILLIAM MORRISON

Thomas Battles the Cruelty of Man and Nature in a Harsh World of the Future to Win Freedom for His People!

TOMAS was conscious of danger all about him, of danger so close that he could almost sniff it. Somewhere in the forest ahead, Jarvis was lurking, and between him and Jarvis, the struggle could have only one end—death. So Tomas walked

cautiously, keeping a wary eye on each tree and bush, ready for instant action should Jarvis show a trace of himself.

And yet, when the threat of death actually materialized, he was not ready. At the moment that Jarvis

drew back his arm to whirl the deadly spin-weapon, the great bird had appeared overhead and by its noise had so startled Tomas, that he forgot the danger. It was not until the weapon came whirling toward his head that he recalled it.

He ducked belatedly, but it was not the quick motion that saved his life. It was the fact that Jarvis, too, had been affected by sight of the bird, and had allowed his aim to be deflected by a matter of inches.

Tomas wasted no more time in staring at the bird or at the men inside it. A quick leap took him to the spot where the spin-weapon had crashed into the ground; and then, with the heavy piece of metal in his hand, he was racing through the forest with all the speed of his long, wiry legs. A second spin-weapon came hurtling after him, but he was already beyond range. He could hear Jarvis, in black disappointment, yelling after him.

"Stand up and fight, you coward!"

If it had been a question of Jarvis alone, Tomas might have complied. But Jarvis, he knew, had hangers-on whom he had persuaded to take his part; and these might very well be nearby in the forest. Tomas was not minded at the moment to risk his life against odds. Not, at least, until he had seen Wanna, who would soon be waiting for him.

He slowed to a long, steady trot. Overhead, the bird had dwindled in the sky until it was only a black spot, and only a faint buzzing sound came from it. Then, even that died away as the black spot disappeared.

Never had Tomas or those he knew seen this bird until the past week. Now, within a few days, they had seen it three times. He wondered uneasily what its intentions might be, and then dismissed it from his mind. He was approaching the sun-dwelling which old Larkin inhabited in solitary splendor. Tomas had something to tell Larkin.

THE sun-dwelling was a wonderful building of many glowing colors that caught the eye even at a great distance. It was dome-shaped, and

Tomas estimated that it was all fifty paces across. He wasn't quite sure because he had never been inside to measure it. Nevertheless, it was a huge place for a single man to inhabit.

But then, of course, Larkin did not really inhabit it alone. He had the Treasure with him, and that required a vast space.

As Tomas came closer, the sun-dwelling lost some of its color, and became a soft gray dome of a smooth material that was said to be warm to the touch. This rumor Tomas believed because he had once touched it. He did not begin to believe some of the other stories people told. It was even said, that although it was impossible to see into the sun-dwelling from outside, any one within could see out with no trouble at all.

His disbelief, however, received a severe shock when he came within a few feet of the entrance. For Larkin, a white-bearded old man, appeared unexpectedly at the entrance, as though he had been watching Tomas' approach.

"Stay away!" he cried vigorously.

"I mean you no harm, Larkin," replied Tomas. "I came to warn you."

"I need no warnings!" The old man seemed furious. "I am annoyed continually by those who wish to steal the Treasure. And I do not believe you mean no harm."

Personally, Tomas had no faith in the existence of a Treasure at all. The old man was crazy, and simply imagined that it was there. At the same time, he felt unsure of himself, and if it were there, he would have liked to see it.

Possibly Larkin was aware of this contradiction in his thoughts. "Go away," he ordered, "before I blast you as I have done the others. And do not try to use the spin-weapon you hold in your hand."

"I have no intention of killing you, Larkin. But I do not fear that you will blast me."

The old man smiled grimly. His brain was addled, thought Tomas, but he did not suffer the foolishness of age.

"It is ten years since I blasted the last man who attempted to rob me.

"He was there, and then he was gone. There were many who saw it, and they have stayed away ever since. Ask them if I have the power to destroy or not."

"Their words are worth nothing. They are old men like yourself, maybe older."

"There you are wrong. They are old, but not as old as I. They were born long after the Yellow Dust. I was a child when it descended upon us, and the world was full of people in numbers you can not even imagine. Most of them died, but I lived. I am over a hundred now, and still strong because the scientists of those days fed me with vitamins you have not even heard of. I remember . . ."

He talked on, with the garrulousness of the aged. Tomas understood very little of what Larkin said, and the little he could make out, he knew was nonsense. Larkin claimed, for example, that no one in these days knew how to use the spin-weapons properly. In his youth, men could kill with them at a distance of a hundred and fifty paces. Now, it was all they could do to kill at twenty.

"Jarvis can kill at twenty-five," said Tomas thoughtfully, "when he finds a victim less alert than I am. Tell me, were men giants in those days, to kill at one hundred and fifty paces? Or did they have more skill than we have now?"

"They had skill, a special kind of skill. They did not throw the weapons. They used them differently, simply pointing, and pulling a trigger. And it will do you no good to ask in what manner the weapons killed. Even though I were to tell you of bullets, you would still be unable to make them."

Tomas shrugged.

"You think I am crazy. You are fools, all of you. A good stone, carefully chosen, would make a better missile than the best spin-weapon. But you are so hide-bound by tradition that you prefer to stake your lives on the spin-weapon and die, rather than use a handful of stones and live. Moreover, if any of you had brains, you would reinvent the bow and arrow."

WHAT Larkin said now seemed to make more sense, but it was complicated, and Tomas dismissed it. After all, it was evident from their very nature that spin-weapons were meant to be thrown. They were smooth, and could be grasped firmly by the barrel for a good, spinning throw. There really was no use wanting words over the obvious.

"You might as well deny," said Tomas, "that knives and forks were made for us to eat with, and for no other purpose."

"That's another of your crazy customs," Larkin asserted in disgust. "None of you so much as lift an apple to your mouths without using a knife and fork on it. 'It's the only way,' you insist. Without them you'd starve. There's an old saying that fingers were invented before knives and forks, but none of you have heard it. And incidentally, knives were invented for other purposes. These old-fashioned ideas of decency—"

Tomas was growing impatient.

"Before I go, Larkin," he broke in, "I must tell you my warning. Jarvis means to kill you and steal your Treasure."

"I will blast him."

"Jarvis will not come alone. He has persuaded some men to follow him, but they are uncertain in their minds as to whether they have done wisely, and Jarvis intends to convince them. As master of your Treasure, he feels that he will be able to buy their allegiance."

"He is a fool, too. Why does he want to control a pack of idiots?"

"He needs them to help in killing me. That," said Tomas frankly, "is why I am warning you. We both want the same girl—"

"You risk death over a girl?" demanded old Larkin. "You both deserve it for your stupidity. Go, and bother me no more."

"Be warned. Jarvis is in earnest."

"Be off. I need no warnings."

In his mind Tomas cursed the old man for his stubbornness, and then was on his way again. For a few seconds Larkin stared after him with suspicious eyes before popping back into his huge lonely sun-dwelling.

Tomas trotted on thoughtfully. Wanna was probably waiting for him by now. He stepped up his pace slightly, to make up for the time he had lost talking to old Larkin.

He skirted the city of ruins that lay on the river bank, fearing the wild cows that made their homes in the brick dwellings, and fed on the grass that grew in the streets. Then he entered another forest, a forest of tall, leafy trees whose heavy branches almost shut out the sun. It was here, beneath the ancient stump of a giant tree that he was to meet Wanna.

AS HE approached the meeting place, Tomas heard the ominous sound of dogs barking. Fear for Wanna's safety suddenly gripped him, and he began to run with all his speed. Another moment, and he had reached the clearing where the giant stump was located.

Wanna was standing on top of it, about six feet off the ground. About her were ranged eight huge dogs, their shoulders almost on a level with the top of the stump, their heads so heavy that the animals, as if oppressed by the weight, usually held them close to the ground. Now the heads were raised, the ferocious teeth showing as the beasts sprang forward at the girl.

Wanna was frightened, Tomas could see that. But she was fighting back bravely. She whirled from one side to another, swinging at the snarling animals with the heavy iron bar that Tomas had once given her for protection. Off to one side, Tomas saw a dog with a badly crushed skull dragging himself away before the rest of the pack should turn on him and finish him off.

The dogs saw Tomas coming before Wanna did, and drew away from the stump to growl at him. They were the most horrible brutes Tomas had ever seen. Their bodies thick and powerful. They had long snouts, heavy jaws, and tusks that projected up almost past their eyes. They were supposed to be the descendants of ancient beasts that had been tame in the days before the Yellow Dust, until both their size and their ferocity

had been magnified by those same scientists of whom Larkin spoke.

They began to move toward him.

Tomas, his hand fumbling at a pouch hanging from his belt, waited until the nearest dog was half a dozen paces away. Then his arm drew back and whipped forward. A tiny piece of metal sailed into the brute's throat, and the animal sprang into the air and collapsed, clawing at the ground. Tomas threw another of the metal objects before turning and starting to run.

The six remaining dogs were soon strung out in a long line behind him. They could not catch him in a short run, but if no help came to him, they knew from previous experience that they could run him down.

Tomas, however, had no fear. He sprinted slightly forward, then turned around, and killed two more dogs before starting to run again. A few minutes later he killed another pair.

The remaining two came to a halt, fear clouding their eyes. Tomas turned and came at them, and now they ran from him.

He retraced his steps to the bodies of the dead dogs. Projecting from the side of each dog's throat was a sharp siver of steel. Inside, the steel had uncoiled and constricted the dog's windpipe, cutting off its breath. Tomas grasped the siver firmly and pulled the spring through the animal's flesh. Then he cleaned the blood off in the ground, and coiled the spring slowly, fitting the end into the notch prepared for that purpose. Now the spring was ready to throw again.

He was careful to secure each piece of steel. The tiny weapons were valuable, for they had been made long before by Tomas' grandfather's grandfather, as a special protection against these very animals. The secret of making them had long been lost, just as man had forgotten how to fashion new spin-weapons.

WANNA was expecting him, knowing that he would soon dispose of the dogs. Tomas greeted her according to the traditional rites that had been preserved by the woman of the tribe, touching her lips briefly

with his own before he spoke to her.

"Jarvis has already tried to kill me," he informed her.

"He will try again."

Tomas nodded. "Sooner or later he will succeed," he remarked calmly, "unless I can find him when I am sure he is alone. With the spin-weapons, he can kill at a greater distance than I can. None the less, in hand-to-hand combat, I would master him, if only he had none of his gang within shouting distance."

"Perhaps you, too, could get others to help you in your fight."

"I? How?"

"If you were to ask Larkin for some of his Treasure—"

Tomas shook his head.

"He would not give it, for he is a miser, and the Treasure is his life. It can be gotten in only one way."

"Jarvis' way?"

"Yes, and that is not for me. It is wrong to kill except over a woman. Then it is an honor slaying, and worth boasting of. But Larkin I will not touch, whether or not it is true that he has the power to blast."

"Then you will surely die at Jarvis' hands," Wanna said angrily.

Tomas scowled. He appeared to be waging a battle against superior forces, and he could see no way out.

"Do you think that you could perhaps steal from Larkin?" Wanna suggested. "Even a two-center would enable you to buy the allegiance of a man."

TOMAS thought of the possibility of burglarizing Larkin's hoard.

"There is but one entrance to Larkin's sun-dwelling, and he guards that jealously," Tomas said with regret. "No, Wanna, it is not possible. Perhaps I might get a two-center some other way."

"There is no other way. In his youth Larkin gathered up almost every bit of treasure for miles around. He has them by the thousands—two-centers, three-centers, perhaps others. My mother told me of them, although I have never seen them myself. You must admit that it is wrong, Tomas, for one man to have so much wealth

and make no use of it."

"There is nothing I can do about it."

"If you were a man, Tomas, you would find something to do, instead of talking calmly of your death. Perhaps you do not think that I am worth fighting for?"

Tomas damned the skill which women had for putting a man in the wrong. Wanna was indignant not at Jarvis, who was going to kill Tomas, but at Tomas, because he was going to be killed. It was probable that she would even expect an apology from his corpse.

She was walking away from him, her nose in the air, and Tomas knew better than to hasten after her. She would interpret that as a sign of weakness. He watched her go, and squatted down on the ground, trying to think of some way out.

But his thoughts had hardly time to get started. For suddenly a loud shriek came to his ears, and he looked up to see Wanna in the grip of two men.

Jarvis' gang! Tomas' face grew white with anger, and he leaped forward. He stopped just in time. His sharp eye had caught the shadowy figure of a third man, who had been lurking behind a bush with a spin-weapon in his hand, waiting for Tomas to come within range.

Wanna's shrieks grew fainter as the two men dragged her away. Tomas, edging up on the one who had been left as a rear guard, tried not to let her cries disturb him. He could not get to her until he had killed this man who was blocking his path. That, he decided, would not take long.

He had two spin-weapons on him, one he had owned previously and the one thrown at him by Jarvis. At a distance of almost twenty-five paces, he threw Jarvis' weapon, which was balanced a little differently from his own. He missed, and ducked a return throw from the man behind the bush. He rushed in and threw again.

The weapon sailed an inch past the man's face. And the man still had one more weapon of his own. He came out from behind the bush now, grinning to see Tomas helpless. Tomas might have saved himself by

sight, but that would have been to leave Wanna to her fate. Tomas did not even think of safety.

POSSIBLY old Larkin's words had been fermenting in his brain ever since their conversation together. Almost without realizing what he was doing, Tomas dropped to the ground, picked up a stone, and threw it.

It hit the man on the forehead. He had time for one single cry of pain and surprise before he fell to the ground, bleeding. Then Tomas was upon him, choking the life out of him.

When Tomas stood up again, Wanna was out of sight and out of hearing, but Tomas was sure that he would find her again. And he was convinced now that he would kill Jarvis.

It was true that the stones, as individual weapons, were not as effective as the spin-weapons. They did not have the convenient grip, the balance to which he was accustomed. Each was of a different size and shape, and would fly through the air differently. In addition, Tomas almost felt a sense of indecency at using them, as if he were to eat with his fingers instead of with a knife and fork.

But they had great advantages. Their number was unlimited. That was the important point. He would not be trusting his life to the one or two spin-weapons he could carry.

Tomas hid the weapons the dead man had owned in a place where he could later find them again. He wanted to take along only the two he had already possessed. Then he filled the pouch at his belt with stones, as nearly of the same size as he could get them, and started out after Wanna again.

When he reached the neighborhood of old Larkin's sun-dwelling, he found a crowd of people, standing around at a distance of some seventy-five paces from the entrance. At the entrance itself was old Larkin, holding a curious tube about a pace long.

Thirty paces from old Larkin stood Jarvis. Near him were half a dozen members of his gang. Wanna, tied hand and foot like a pig ready for

slaughtering, has been thrown on the ground and temporarily neglected.

Larkin's face was grim as he brandished the tube in the air.

"I am warning you, Jarvis," he cried, "that you will never live to enjoy my Treasure. Whatever happens to the others, be sure that you at least will be blasted out of existence."

"You would blast me now if you had the power, you old fool," Jarvis grinned. "But you can not. You are a fraud."

"Come within range, and I will show you whether I am a fraud. Step up a few paces, Jarvis."

Jarvis whispered several words to his men, and they separated, ringing Larkin around in a semi-circle, so that he could not keep his eyes on all of them at once. But they remained out of range.

Tomas spoke indignantly to one of the numerous bystanders, a man he did not know.

"This is murder, not an honest slaying. Jarvis has no right to old Larkin's Treasure!"

"And who is to stop him from taking it?"

"We—all of us!"

"Why should any of us die for old Larkin?" asked the man reasonably. "He has never done anything for us. He sits with his board, running the two-centers and three-centers through his fingers, but never parting with them. Jarvis has promised us that if we do not interfere, we shall each receive part of the Treasure, enough to make us wealthy for life. Personally, I shall be glad to see the end of the old miser."

JARVIS' men, at a signal from their leader, were making a sudden dash for Larkin. The old hermit whirled, and pointed the long tube at one of them. The man disappeared.

Tomas saw it with his own eyes. One moment the man was there, and the next he was no longer in existence. Only a thin mist marked the spot where he had stood! There was a gasp of horror from the crowd, and then a shout of revenge, as Jarvis and those of his men that remained hurled their weapons.

But most of them had been unnerved by seeing what had happened to their companion. Their weapons clattered dully against the sun-dwelling, only that of Jarvis himself catching the old man on the side of the head and laying open the scalp. Larkin staggered, but did not fall. He aimed the tube again, and the men turned and ran for their lives, but not before one of them had been caught and blasted.

The grim silence that followed was broken only by Larkin's shouts of triumph.

"So I am a fraud, am I? Come closer, Jarvis, and learn what has happened to your men! Enjoy the Treasure I have saved for you!"

The old man's white hair was now scamed with red, and he tottered as he spoke, but Jarvis did not accept the invitation.

"You are less a fraud than I had thought, Larkin, but still we shall win in the end. I am giving you one more chance. Leave the sun-dwelling and the Treasure to us, and go where you please. We shall not harm you."

Larkin brandished the deadly tube. "No, not so long as I have this."

"We are not such fools as to come within range again. We shall simply stay here and wait for you to die." Jarvis snarled, "You are wounded, Larkin, and perhaps soon you will fall to the ground and sleep. Already your feet are unsteady. Or you will need food. We shall not let you go out to seek it. We can run faster than you, and if you leave the entrance to your dwelling we shall surround you and kill you from the rear."

"I have food in here," Larkin leaned unsteadily against the side of the sun-dwelling.

"It will not remain fresh, and you will be forced to seek more. No, Larkin, you will do better to accept our offer."

Watching the old man, Tomas realized that he could not remain conscious much longer. And the moment he collapsed, Jarvis would be in for the kill. Jarvis would have the Treasure, and he would have Wanna, as well.

Tomas sprang forward. Because

their attention was centered on old Larkin, he was able to get within twenty paces of Jarvis' men before they realized his presence. His first spin-weapon caught one of them on the back of the skull and crushed it, his second landed behind a man's ear and knocked him down. Then, as the others turned in alarm, he drew back.

Jarvis glared at him. "You have no more weapons, Tomas. Be prepared to die."

Tomas' hand dropped to the pouch at his belt, and a stone flew toward Jarvis' face. Jarvis, startled, had barely time to duck. The next stone caught him in the stomach, and he yelled in pain.

But the stones, although they had a greater range, were lighter than the spin-weapons, and did not do as much damage. Jarvis and his men drew back hastily as Tomas advanced, away from the sun-dwelling.

Tomas, exultantly following, forgot himself. Stone after stone flew from his eager fingers. The two men who still remained with Jarvis had by now given up all hope of securing the Treasure. One of them suddenly turned and took to his heels, and the other followed. Jarvis alone was left.

Tomas' hand, dropping to his pouch, encountered only emptiness. A blank look overspread his face. Jarvis perceived it, and approached, raising his own spin-weapon for the fatal throw. Tomas turned and raced for the sun-dwelling.

Larkin had finally collapsed, and was lying across the entrance to the sun-dwelling, the tube on the ground a few inches from his head. Tomas threw himself upon the tube, twisted around like a cat, and pointed it at Jarvis. He squeaked, and something at the end seemed to yield.

Jarvis' spin-weapon, already flying in the air toward him, vanished. Jarvis, the expression of triumph still on his face, brought up short, and there was no time for it to change before he too had gone to follow his weapon.

Tomas gulped in wonder at what he had done and, still clutching the tube, ran toward Wanna. When

(Turn to page 116)



“ATTACK AT 0600!”

In the Army, that simple order means action! Excitement! It means American troops are going ahead against the enemy!

Before that order can be transmitted by the Signal Corps, it means that plans must have been made for months in advance, troops must have been moved into position, hundreds of reconnaissance flights must have been made, thousands of tons of supplies and munitions prepared.

It means that in America millions of men and women in factories and mills, on farms and in the homes, in shipyards and steel mills, in logging camps and mines, have been working day and night for weeks and months.

You, no matter who you are nor what you do, have your part in making that order possible so that we may smash our enemies!

“Attack at 0600!”

DAWSON ELMSTEAD
MAJOR GENERAL
CHIEF SIGNAL OFFICER
U. S. ARMY



THE TREASURE

(Continued from page 114)

he had cut the things that bound her, he moved toward the sun-dwelling. Wanna was close at his heels, and behind them, impelled by an irresistible curiosity, came the crowd of bystanders. What had been said of the sun-dwelling was true. Although it was impossible to see in through the walls, there was no trouble in seeing out. But it was not this wonder that held Tomas and Wanna spellbound. It was the greater wonder that now spread before them.

Behind him Tomas could hear the gasps of astonishment from the crowd now pressing into the sun-dwelling. The whole building was filled with Treasure. Glowing in the sunlight that poured through the walls were heap upon heap of two-centers and three-centers. There was enough so that all the men, and the women and children in Tomas' tribe, and in the tribes nearby, could be wealthy beyond their dreams for the remainder of their lives. And old Larkin, with no earthly use for it, had jealously kept it to himself.

The excitement of the crowd was growing beyond bounds. One man rushed ahead and clutched an armful of two-centers to his breast. A half dozen others raced forward, their eyes gleaming with the lust for wealth.

Tomas frowned. He did not like this mad scramble. As he watched, he became aware of a faint sweet odor, not unpleasant, and yet somehow disturbing. He knew that Wanna perceived it too, for he could see her sniff uncertainly.

Men and women began to collapse about him. Wanna fell to the ground, a look of astonishment on her face. Tomas, reeling uncertainly, was aware of a buzzing sound in his ears, as if the great bird he had seen earlier in the day were returning. Then the blackness overcame his mind, and he was aware of no more. . . .

THE masked man who approached the sun-dwelling looked about them curiously. The tallest of the group asked:

"Think we got them all?"

The captain nodded.

"I don't believe they knew what was hitting them. Of course, the an-aesthetic has an odor that's faintly disturbing, but it won't mean much to them."

They stopped to stare down at the men whom Tomas had killed.

"No doubt about their being savages," commented the tall man.

"Oh, we'll change all that," returned the psychologist of the group. "Their minds are fundamentally as good as ours. All they need is the proper training."

"The remarkable thing," said the leader, "is not that they've become savages, but that they've managed to survive at all. When our ancestors finally escaped to the safety of Galapagos, they were convinced that both North and South America were completely uninhabitable.

"They couldn't see how any living thing, any living vertebrate at the least, could survive the Yellow Dust that confounded comet sent out at us. But evidently there were small oases in the vast deserts. And these people have had the grit and the ability to hang on to life."

"That shouldn't have been hard." The tall man grunted. "The human race was pretty far advanced by then. There had been a start in the development of space-travel. Atomic power was a reality. There were even atomic weapons that could blast matter out of existence. And take a look at this building. Unidirectionally transparent plastic or I'll eat my hat. And probably in as good condition as the day it was poured."

"You don't give them half enough credit, Lanning," the historian of the party insisted. "The race knew a lot in those days, but knowledge dies rapidly when the society that gave it birth disappears. They probably had to start from scratch, learning to adjust themselves to the new conditions. The customs and traditions they inherited from civilization were probably more of a handicap than a benefit."

They entered the sun-dwelling and stared.

"I'll be blasted!" Lanning exclaimed. "Now, what's the purpose of

all that? Am I seeing right?"
The psychologist peered through his lenses.

"Probably a curious tribal custom."

"I'll say it's curious!" The captain laughed. "All those bottles! Milk bottles of the ancient days, aren't they?"

"Most of them are. Some of them have Pepsi-Cola written on them. What's that?"

"That was a popular beverage during that time, wasn't it?" said the historian.

"What could they want the empty bottles for?" demanded Lanning.

"Who knows?" The psychologist shrugged. "Probably thought they were valuable, and undoubtedly murdered each other for them."

"What a job we've got," sighed Lanning. "Having to civilize people like that!"

ALI BABA, JUNIOR

(Continued from page 104)

I explained to Litmas.

He roared with laughter. "You've made good, Lane!" he cried. "I've no further objection to you as a son-in-law."

As I clasped Thalia in my arms, she looked at her father and exclaimed:

"Oh, Daddy, look at yourself in a mirror! You've turned a beautiful pink!"

And everything was rose-colored from there out.

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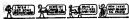
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G-MAN OUTPAT

There were a 12-page set, miscellaneous
pages, athletic equipment, no map
of the entire system. Major highways

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1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

[illegible]

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100



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I'd love to pin your long ears back. What's the idea of calling the old Sarge on a word, anyhow? Can't I coin a new one if I want to? "Eunuchance" is the first collar of foam on a Xero highball. "Viruperation" is two persons doubling up on a ration card for exercise in these parts.

Now crawl back into your cage while I try to head off a cyclone from Kansas.

PREVIEW COVER

Full Text

THESE

First thing I do when I get the summer issue of your paper is look at the cover. Sure! What is it and how come? Well, anyway, I read the story, expecting an explanation but I just can't find anything in the whole magazine to really connect with the cover. Oh, well, maybe it's a matter of the first issue.

I am, honestly, in favor of Carmen's going to Germany, but not monthly. By the way, how old are Juan and Marta going to be when they find their little paradise? Probably about 18.

Just a word about "After Intelligence". Since it's by Jack Williamson it's sure got to be good. I have been disappointed by a lot of the so-called old time science-fiction, but not by this one.

Drug All Drug and OTC make up—Larry
Weeks The West Hill, Texas, House

All right, come out of that corner while Baggy-pants hands me a rocket wrench. I've heard all I want to hear about that loose situation. Here's the answer.

Most of the tribe of artists can't read type. So we have to draw them a word picture of the scene they are to paint. Sometimes their color sense fails them. Sometimes the finished painting looks a little flat or dull. Sometimes—but what does it matter why? The thing is that the artist realizes something is lacking, and he whittles off a small chunk of his own imagination and desks it onto the canvas for dramatic effect. Remember the brass horns sticking out of Orfeo's shoulder blades?

We had a knock-down and drag-out before we could put over the idea of debarring the android. Every so often something slips into a painting from elsewhere in the story, or just—elsewhere. Which comes under the heading of symbolism. Which negates the old Gorge's materialism. Which is enough of an explanation for now. He broke the croaker outside out of bed and go to sleep. Remember, an artist uses a paint brush not a camera.

NO WOMEN

By James Russell Oliver

[illegible]

"I would like to put the city on the suggestion by one of your readers to have another plan of the County Home rendered (such as mental) have your people reading it" and enclosed the other side. How about it?"

And I think people have gotten out of the story. Every other magazine has written to it, so make it your own. Please do it. —Kane, Ia.

Myra: The old man's dog simply can't con-

calve a universe without women, or a reasonable facsimile thereof. Moreover, he wouldn't like to exist in such a one. Perhaps what you mean to say is—no lovey meah. Surely you don't mean "no women." Who's to spread jelly on your bread and plaster down your cowlick when the preacher calls if there are no women? And the old Sarge wants some place to go nights after being corralled with your space monkeys all day.

But I'll tell Hamilton what you are foolishly asking for—an Endless universe.

Come now a gall astrologer who, if she knew what writing what you have just said, would probably have started you with a hot rocket.

A LADY SPEAKS

By Sarah Flores

Can a girl pocket twice her thoughts of your soul, eh? I have been a reader of *Carmine Furber* for a very long time—in fact, I read your very first issue. I didn't think I could get better, but every issue is better. To tell the truth, I don't pay any attention to the cover layout anymore for the name *Carmine Furber*. My only job is that if I'm on the *unbelievable* every month—well, carry on, *Mr. Aberdeen*, Wash.

Honey chile, what you say may not come under the head of criticism, but word like this from folks like you is what gives the old space dog the strength and courage to carry on against those wobblers of space we cage up here in the astrologation chamber. If I had known you were coming on this voyage, I'd have stirred up a cake. And don't think the old Sarge can't sling a mean hand to the galley.

PRACTICALLY SPEECHLESS

By Patricia Varuto

Honestly, I am practically speechless. "Patricia in Paris" was the best of the best. I am almost sure this great story I'll have to stop reading *Carmine Furber*. Nothing will ever be able to compare with it. It not only told my complete story of the way through, with everything working out just the way you wanted it to, but you gave us that terrific ending. I read the last paragraph twice and each time I got a thrill. It reminded me of "This above all to thine own self be true. And it must follow, as the stars the sky, thou shalt not then be false to any man." etc.

Capitaine Furber makes me think of that, for he was true in his thoughts and his method of living, and in the end he has lived up to that for he had not been false to any man, only true to himself.

Please, if you don't mind what about the GURNEY men on the cover, and the girl's face who the boys are looking through? Or about I read something? That's all I just thought I would mention it.

Thanks for the EXTRA nice comments on my letter, if it's because I am a devoted astronaut. [Turn page]

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from any as I will be quite well-headed about that part.

So I'ma Sarge, I'll be seeing you at the lake on Lakeview next trip. They are the only thing in the world that I love. 1017 1/2 N. Dearborn St., Chicago, Ill.

You're speechless, child? Two letters in a row from girl pee-lonal. The old Sarge is the guy with the tongue-tied vocal cords. I'm gonna make blarney, too. And quoting Shakespeare to me, also. But you're giving the old Sarge the credit that goes to Author Hamilton. I got quite a kick out of the surprise ending of this adventure of Curt Newton myself.

But see here, young lady, never you mind about the little green men on the cover. Just read what I told Kiwi Hanaly a couple of racket jets back.

CALLING CAPTAIN FUTURE

By Richard Hirschfeld

You are about to receive the full blast of a prison detail in your paper. I'm one who isn't getting to prison yet. Take a deep breath, tighten your belt, and look for your bag of Xeno. You'll need it.

Like many other G.P. fans read I am apt to be asking you where is Wren? I miss him. He gave your Man class. Han's hoping we'll have you back soon. Did Wrenski do the front cover? It looks like his work. In other words, the front cover was a disappointment. The large illustrations weren't much better except for Wren's piece of art. Money doesn't belong in C. J.

Coke is supposed to be the master of disguise. Why doesn't he make use of this in some of the stories? How about that Captain with a few disguises more in a while? And how about the subject he said for making himself invisible in "The Mugging of Maud"?

And now I'll turn a few compliments your way to balance the scales. To start out with, I

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happ, your next scientific discovery is as good as Shakespeare's was. I thoroughly enjoyed it. The short stories were a little below average, but were enjoyable. I liked one of your Special Features, particularly, Under Observation and The Possession. —W. Washington St., Hattiesburg, Miss.

Okay, Pee-let Mirachfeld. You graciously blew up right in the old Sergei's face. You asked a number of questions, too—pertinent questions. But as the Sergei doesn't know all the answers, I won't undertake to explain. I'll just call your letter to the attention of Edmund Hamilton. I'd like to see Orlin to disguise again myself.

GOOD COVER

By W. J. Mason

Not down that Xmas list, don't you know you didn't run up into something? The cover of *Parade* for Xmas was good! "Parade is back" was very good! The two short stories were good, especially "The Fruit of Prohibition," because it didn't happen on Mars or Venus, but a chance! —Franklin, N. Y.

Ho-hum! Already tired of our two neighboring planets, are you, pee-let? Why, we haven't finished exploring Earth yet, much less making a dent in the topography of Mars and Venus. I see in the news lately that a Chinese scholar comes forward to claim that there is a real Shangri-La hidden in Tibet about which James Hilton wrote so vividly in "Lost Horizons." But let it lay. We'll try not to be

[Turn page]

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